

## DOCUMENT RESUME

ED 454 377

CE 081 795

TITLE Illinois Occupational Skill Standards: Swine Production Cluster.

INSTITUTION Illinois Occupational Skill Standards and Credentialing Council, Carbondale.

SPONS AGENCY Illinois State Board of Education, Springfield.

PUB DATE 2000-12-00

NOTE 126p.; For other Illinois Occupational Skill Standards, see ED 443 016-034, ED 448 350-355 and CE 081 793-794. Produce developer was Gayla Sargent.

AVAILABLE FROM Curriculum Publications Clearinghouse, Western Illinois University, Horrabin Hall 46, 1 University Circle, Macomb, IL 61455-1390. Tel: 800-322-3905 (Toll Free); Fax: 309-298-2869, e-mail: CPC@wiu.edu. For full text: <http://www.standards.siu.edu/>.

PUB TYPE Guides - Non-Classroom (055) -- Legal/Legislative/Regulatory Materials (090)

EDRS PRICE MF01/PC06 Plus Postage.

DESCRIPTORS Agribusiness; Agricultural Education; \*Agricultural Occupations; Agricultural Production; Agricultural Skills; \*Animal Husbandry; Competence; \*Competency Based Education; Employment Potential; Evaluation Criteria; Job Skills; Livestock; Occupational Clusters; \*Occupational Information; Postsecondary Education; Secondary Education; \*State Standards; Vocational Education

IDENTIFIERS \*Hogs; \*Illinois

## ABSTRACT

This document contains 52 Occupational Skill Standards for the swine production occupational cluster, as required for the state of Illinois. Skill Standards, which were developed by committees that included educators, business, industry, and labor, are intended to promote education and training investment and ensure that students and workers are trained to meet industry standards benchmarked to international competitors. The standards include work to be performed, conditions of performance, performance criteria, performance elements, and performance assessment criteria (product and process). The 52 standards of the swine production occupational cluster are grouped into the following 13 areas: (1) accident and emergency procedures; (2) feeding and watering; (3) sanitation; (4) farrowing; (5) neonatal and young stock care; (6) other health and production procedures; (7) swine identification; (8) parasite control; (9) pest control in facilities; (10) moving swine; (11) restraining swine; (12) breeding swine; and (13) record keeping. The document's introductory section provides information on skill standard development and requirements, occupational earnings and employment information, and performance skill levels. Five appendixes include a glossary of 10 terms, and lists of members of the Illinois Occupational Skill Standards and Credentialing Council (IOSSCC); the IOSSCC Agriculture and Natural Resources Subcouncil, the IOSSCC Swine Production Cluster Standards Development Committee, and workplace skills. (KC)



# ILLINOIS

## OCCUPATIONAL SKILL STANDARDS

# SWINE PRODUCTION CLUSTER

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# **ILLINOIS OCCUPATIONAL SKILL STANDARDS SWINE PRODUCTION CLUSTER**

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# **ILLINOIS OCCUPATIONAL SKILL STANDARDS**

## **SWINE PRODUCTION CLUSTER**

Endorsed for Illinois  
by the  
Illinois Occupational Skill Standards and  
Credentialing Council

## A MESSAGE FROM THE ILLINOIS OCCUPATIONAL SKILL STANDARDS AND CREDENTIALING COUNCIL

Preparing youth and adults to enter the workforce and to be able to contribute to society throughout their lives is critical to the economy of Illinois. Public and private interest in establishing national and state systems of industry-driven skill standards and credentials is growing in the United States, especially for occupations that require less than a four-year college degree. This interest stems from the understanding that the United States will increasingly compete internationally and the need to increase the skills and productivity of the front-line workforce. The major purpose of skill standards is to promote education and training investment and ensure that this education and training enables students and workers to meet industry standards that are benchmarked to our major international competitors.

The Illinois Occupational Skill Standards and Credentialing Council (IOSSCC) has been working with industry subcouncils, the Illinois State Board of Education and other partnering agencies to adopt, adapt and/or develop skill standards for high-demand occupations. Skill standards products are being developed for a myriad of industries, occupational clusters and occupations. This document represents the collaborative effort of the Agriculture and Natural Resources Subcouncil, and the Swine Production Cluster Standards Development Committee.

These skill standards will serve as a guide to workforce preparation program providers in defining content for their programs and to employers to establish the skills and standards necessary for job acquisition. These standards will also serve as a mechanism for communication among education, business, industry and labor.

We encourage you to review these standards and share your comments. This effort has involved a great many people from business, industry and labor. Comments regarding their usefulness in curriculum and assessment design, as well as your needs for in-service and technical assistance in their implementation are critical to our efforts to move forward and improve the documents.

Questions concerning this document may be directed to:

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We look forward to your comments.

Sincerely,

The Members of the IOSSCC

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## THE ILLINOIS PERSPECTIVE

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The Occupational Skill Standards Act (PA 87-1210) established the nine-member Illinois Occupational Skill Standards and Credentialing Council (IOSSCC). Members of the Council represent business, industry and labor and are appointed by the Governor or State Superintendent of Education. The IOSSCC, working with the Illinois State Board of Education, Illinois Community College Board, Illinois Board of Higher Education, Illinois Department of Employment Security and Illinois Department of Commerce and Community Affairs, has created a common vision for workforce development in Illinois.

### VISION

**It is the vision of the IOSSCC to develop a statewide system of industry-defined and recognized skill standards and credentials for all major skilled occupations providing strong employment and earnings opportunities in Illinois.**

The IOSSCC endorses occupational skill standards and credentialing systems for occupations that:

- require basic workplace skills and technical training,
- provide a large number of jobs with either moderate or high earnings, and
- provide career advancement opportunities to related occupations with moderate or high earnings.

### Subcouncils and Standards Development Committees

Under the direction of the Council, and in cooperation with industry organizations and associations, Industry Subcouncils have been formed to review, approve and promote occupational skill standards and credentialing systems. The Industry Subcouncils are Agriculture and Natural Resources; Applied Science and Engineering\*; Business and Administrative Information Services; Communications; Construction\*; Education and Training Services\*; Energy and Utilities\*; Financial Services; Health and Social Services; Hospitality; Legal and Protective Services\*; Manufacturing; Marketing and Retail Trade; and Transportation, Distribution and Logistics. (\*Subcouncils currently being formed.)

Standards Development Committees are composed of business, labor and education representatives who are experts in the related occupational cluster. They work with the product developer to

- Develop or validate occupational skill standards,
- Identify related academic skills,
- Develop or review assessment or credentialing approaches, and
- Recommend endorsement of the standards and credentialing system to the Industry Subcouncil.

### Expected Benefits

The intent of skill standards and credentialing systems is to promote education and training investment and ensure that students and workers are trained to meet industry standards that are benchmarked to our major international competitors. Skill standards and credentialing systems have major benefits that impact students and workers, employers, and educators in Illinois.



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### **Students and Workers**

- Help workers make better decisions about the training they need to advance their careers.
- Allow workers to communicate more effectively to employers what they know and can do.
- Improve long-term employability by helping workers move more easily among work roles.
- Enable workers to help their children make effective academic and career and technical decisions.

### **Employers**

- Focus the investment in training and reduce training costs.
- Boost quality and productivity and create a more flexible workforce.
- Improve employee retention.
- Improve supplier performance.
- Enlarge the pool of skilled workers.

### **Educators**

- Keep abreast of a rapidly changing workplace.
- Contribute to curriculum and program development.
- Provide students with better career advice.
- Strengthen the relationship between schools and local businesses.
- Communicate with parents because educators have up-to-date information about industry needs.

The IOSSCC is currently working with the Illinois State Board of Education and other state agencies to integrate the occupational standards with the Illinois Learning Standards which describe what students should know and be able to do as a result of their education. The Council is also working to integrate workplace skills—problem solving, critical thinking, teamwork, etc.—with both the Learning Standards and the Occupational Skill Standards.

## IOSSCC Requirements for Occupational Skill Standards

Illinois Occupational Skill Standards define what an individual should know and the expected level of performance required in an occupational setting. They focus on the most critical work performances for an occupation or occupational area.

Any occupational skill standards and credentialing system seeking IOSSCC endorsement must

- represent an occupation or occupational cluster that meets the criteria for IOSSCC endorsement, including economic development, earnings potential and job outlook;
- address both content and performance standards for critical work functions and activities for an occupation or occupational area;
- ensure formal validation and endorsement by a representative group of employers and workers within an industry;
- provide for review, modification and revalidation by an industry group a minimum of once every five years;
- award credentials based on assessment approaches that are supported and endorsed by the industry and consistent with nationally recognized guidelines for validity and reliability;
- provide widespread access and information to the general public in Illinois; and
- include marketing and promotion by the industry in cooperation with the partner state agencies.

Occupations that do not meet the earnings criteria for IOSSCC endorsement, but are part of an occupational cluster that is being developed, may be presented for recognition by the IOSSCC. IOSSCC members encourage individuals to pursue occupational opportunities identified as endorsed occupations. Examples of occupations that do not meet the endorsement criteria, but have been recognized by the IOSSCC are Certified Nurse Assistant and Physical Therapy Aide.

### Skill Standards Components

Illinois Occupational Skill Standards must contain these areas:

- Performance Area
- Performance Skill
- Skill Standard
- Performance Elements
- Performance Assessment Criteria

The Council further identified three components of the Skill Standard (*Conditions of Performance, Statement of Work and Performance Criteria*) as critical work functions for an occupation or industry/occupational area. The sample format for Illinois Occupational Skill Standards on the following page provides a description of each component of a skill standard.

The sample format also illustrates the coding at the top of each page identifying the state, fiscal year in which standards were endorsed, Subcouncil abbreviation, cluster abbreviation and standard number. For example, the twenty-fifth skill standard in the Swine Production Cluster, which has been developed by the Agriculture and Natural Resources Subcouncil, would carry the following coding: IL.00.ANR.SPC.25.

**SUMMARY OF WORK TO BE PERFORMED. SUMMARY IS BRIEF AND BEGINS WITH AN ACTION VERB.**

**IL.FY.SUBCOUNCIL. CLUSTER. STANDARD NO.**

**PERFORMANCE AREA**

## **SKILL STANDARD**

### **CONDITIONS OF PERFORMANCE**

A comprehensive listing of the information, tools, equipment and other resources provided to the person(s) performing the work.

### **WORK TO BE PERFORMED**

An overview of the work to be performed in demonstrating the performance skill standard. This overview should address the major components of the performance. The detailed elements or steps of the performance are listed under "Performance Elements."

### **PERFORMANCE CRITERIA**

The assessment criteria used to evaluate whether the performance meets the standard. Performance criteria specify product/outcome characteristics (e.g., accuracy levels, appearance, results, etc.) and process or procedure requirements (e.g., safety requirements, time requirements, etc.).

## **PERFORMANCE ELEMENTS**

Description of the major elements or steps of the overall performance and any special assessment criteria associated with each element.

## **PERFORMANCE ASSESSMENT CRITERIA**

Listing of required testing, certification and/or licensing.

Product and process used to evaluate the performance of the standard.

### **PRODUCT**

Description of the product resulting from the performance of the skill standard.

### **PROCESS**

Listing of steps from the Performance Elements which must be performed or the required order or performance for meeting the standard.

## OCCUPATIONAL, EARNINGS AND EMPLOYMENT INFORMATION

### I. Developmental Process and Occupational Definition

#### A. Developmental Process

After reviewing current labor market information and considering the fact that the swine production occupational cluster will need a steady supply of replacement workers, the Agriculture and Natural Resources Subcouncil recommended that this occupational cluster be developed. Careers in this cluster include the full range of livestock production workers from the owner/operator of a family farm to the range of workers in and around corporate livestock operations. This cluster meets the criteria for development established by the Illinois Occupational Skill Standards Credentialing Council (IOSSCC). A product developer knowledgeable about agricultural livestock occupations began the process of performance skill identification. Given the range within several occupations, the initial charge for the product developer was to prepare a set of skills that would address the major work areas in any workplace. This framework set the boundaries for addressing skill performances required by the livestock production occupations.

The Subcouncil recommended that the final skill standards product be presented to the IOSSCC. The IOSSCC reviewed the skill standards and met with the product developer, state liaison and chair of the Subcouncil. Based on the review, the IOSSCC voted to endorse the Livestock Swine Production Cluster skill standards, recognizing the occupation of General Assistant/Production Assistant.

#### 1. Resources

Resources used included job descriptions from the *Dictionary of Occupational Titles*; Illinois Department of Agriculture Livestock Management Facilities Act and Rules, August 1999; Title 35: Environmental Protection; Environmental Assurance Program Manual, Pork Quality Assurance Manual, Swine Care Handbook and Nutrient Requirements of Swine of the National Pork Producers Council (NPPC); Pork Industry Handbook; National Research Council Nutrient Requirements of Swine; Swine Handling and Transporting Videos from NPPC; and Illinois task lists previously developed.

#### 2. Standards Development Committee

The Standards Development Committee was composed of workers from all levels within the swine production cluster. The framework and initial outline of performance skills were addressed and reviewed at an initial meeting. During this time the work titles and skill matrix were accepted and the skills standards were reviewed and revisions suggested. Additional meetings took place and the skills standards, occupational titles and matrix were reviewed and then accepted by the Standards Development Committee. The Agriculture and Natural Resources Subcouncil reviewed and approved the cluster.

#### B. Occupational Definition

The typical livestock producer is manager, laborer and bookkeeper. Large livestock operations may hire managers to oversee and coordinate livestock activities. Today's livestock operations are increasing in size and mechanization. Animal production often involves large capital outlays and numerous skills as well as personal time and energy. Some operations raise only livestock, while others raise grain and livestock. Some producers supplement their income with nonfarm work. The workload and duties vary with the size and type of livestock operations.

1. **General Assistant/Production Assistant** helps with the year-round livestock operations and maintenance. Work varies with the type of farm/operation. It includes tasks such as preparing and providing feed and water, cleaning facilities, assisting with farrowing, caring for swine, breeding swine and repairing buildings and equipment.
2. **Livestock Manager/Assistant Manager** is concerned with the efficient and profitable production of agricultural livestock. He must also be familiar with all phases of livestock production such as animal growth, insect and disease control, and federal and state regulations that apply to farm practices. In addition, livestock managers/assistant managers are responsible for production management decisions effecting the operation. These include production planning, labor planning and marketing decisions.
3. **Owner/Operator** typically performs all duties of a general assistant and production manager/assistant manager.

## II. Employment and Earning Opportunities

### A. Education and Training Requirements

Knowledge of agricultural practices, equipment operation, building maintenance and pest control, as well as local, state and federal regulations applicable to livestock production, is required. Record keeping systems must be complete, accurate and well maintained. The occupations in this cluster require "basic workplace skills, technical training and safety training."

### B. Employment Opportunities

In Illinois, overall employment of livestock producers is expected to remain relatively unchanged through the year 2006. However, a significant number of job openings will arise due to the need to replace some of those who retire. In many local areas throughout Illinois, farmers and related occupations are among those expected to provide the most annual job openings, on the average.

### C. Earnings Opportunities

	Middle Range Annual Earnings, 1999*
General Assistant	\$15,000 - \$18,000
Production Assistant	\$18,000 - \$23,700
Manager/Assistant Manager	\$28,000 - \$40,000
Owner	\$21,000 - \$50,000

\* Middle range is the middle 50%, i.e., one-fourth of persons in the occupation earn below the bottom of the range and one-fourth of persons in the occupation earn above the top of the range.

Sources: 1999 Survey of Clients by Profitable Solutions; 1999 AgriCareers Survey.

## III. Assessment and Credentialing Systems

The IOSSCC recognizes that industry commitment for third party assessment is beneficial and requests that each Standards Development Committee (SDC) and/or Agriculture and Natural Resources Subcouncil identifies the most beneficial method for assessing the standards.

- 
- A. The Swine Production SDC has recommended that training providers use performance assessments validated by third party industry verifiers when assessing the Swine Production standards. Pork Quality Assurance (PQA) verifiers include selected veterinarians, agriculture extension personnel and agriculture educators.
  - B. The Agriculture and Natural Resources Subcouncil is committed to marketing and obtaining support and endorsements from the leading industry associations impacted by skill standards. A number of existing credentials are compatible with the Illinois standards. As a core of standards, their achievement is preparation for credentials that require years of experience, professional involvement and/or further course work in addition to the demonstrated achievement of the standards. The Pork Quality Assurance (PQA) Level III certification administered by the National Pork Producers Council (NPPC) is an example of an advanced credential that can be earned. An individual producer must meet with a PQA verifier to complete certification.

The Subcouncil reviewed and considered all alternatives for assessing skill standards for Livestock Swine Production Cluster. The need for additional credentialing or certification was reviewed with strong consideration given to embedding the assessment in the instruction provided at the site.

#### **IV. Industry Support and Commitment**

##### **A. Industry Commitment for Development and Updating**

1. The Agriculture and Natural Resources Subcouncil and the Swine Production Cluster Standards Development Committee developed these performance skill standards. The development effort utilized the following steps:
  - a. Identification of performance skills
  - b. Review of resources
  - c. Development of draft performance skills
  - d. Convening of Standards Development Committee
  - e. Validation and approval of performance skills by Standards Development Committee
  - f. Review of skill standards by Standards Development Committee
  - g. Review and approval of the skill standards by the Agriculture and Natural Resources Subcouncil and practitioners
  - h. Endorsement of skill standards by the Illinois Occupational Skill Standards Credentialing Council (IOSSCC)
2. A list of members of the Agriculture and Natural Resources Subcouncil and Swine Production Cluster Standards Development Committee are located in Appendices D and E.

##### **B. Industry Commitment for Marketing**

The Agriculture and Natural Resources Subcouncil is committed to marketing and obtaining support and endorsement from the leading industry associations impacted by the skill standards. Upon recognition/endorsement of the Swine Production Cluster skill standards by the IOSSCC, the Subcouncil strongly recommends developing and providing an in-service/seminar package for its members to provide awareness and obtain full industry commitment to the development of a full industry marketing plan.

The Agriculture and Natural Resources Subcouncil encourages the availability of occupational skill standards to the public, including students, parents, workers, educators at all levels, employers and industry organizations.

## **ASSUMPTIONS FOR SWINE PRODUCTION CLUSTER STANDARDS**

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### **Skill standards statements assume:**

1. Workplace skills (employability skills) are expected of all individuals. Socialization skills needed for work are related to lifelong career experience and are not solely a part of the initial schooling process. These are not included with this set of statements.
2. Specific policies and procedures of the work site will be made known to the individual and will be followed.
3. Time elements outlined for the skill standards result from the experience and consideration of the panel of experts who made up the standards development committee.
4. Skills will progress from simple to complex. Once a skill has been successfully performed, it will be incorporated into more complex skills.
5. Skill standards describe the skill only and do not detail the background knowledge or theory related to the particular skill base. Although the skill standard enumerates steps to successful demonstration, rote approaches to the outcomes are not prescribed.
6. Complete all work in an expedient and safe manner.
7. Skill standards are selected because they meet workplace needs and are designed to meet professional standards of practice.
8. Skill standards do not replace, supersede or substitute for procedure manuals.
9. Skill standards in no way supersede or take the place of certification or graduation from an accredited program of study.
10. Skills identified under "Neonatal and Young Stock Care" are normally performed at the same time for each litter.
11. All equipment is in good working order, with all safety devices in place.
12. Needles are not bent or broken.
13. All individuals working with swine waste handling have received safety training.
14. Swine facilities and areas are properly ventilated and environmentally regulated.
15. All individuals working with swine breeding males and females have had supervised training and have a maturity level adequate to safely handle such animals.
16. Biosecurity protocol is detailed and followed by all individuals.



## PERFORMANCE SKILL LEVELS

	GENERAL ASSISTANT/ PRODUCTION ASSISTANT	MANAGER/ASSISTANT MANAGER	OWNER/OPERATOR
<b>ACCIDENT AND EMERGENCY PROCEDURES</b>			
Maximize Farm Safety	•	•	•
Perform Emergency Procedures for Power Outages	•	•	•
Follow Accident/Incident Response Procedures	•	•	•
Submit Accident and Insurance Reports and Claims		•	•
<b>Feeding and Watering</b>			
Water with Automatic Systems	•	•	•
Mix Feeds	•	•	•
Select Rations		•	•
<b>Sanitation</b>			
Remove Swine Waste	•	•	•
Store Swine Waste	•	•	•
Dispose of Swine Waste	•	•	•
Clean and Disinfect Swine Facilities	•	•	•
Dispose of Dead Swine	•	•	•
<b>Farrowing</b>			
Prepare Farrowing Area	•	•	•
Manage Breeding Females Near Farrowing	•	•	•
Induce Farrowing		•	•
Observe Farrowing	•	•	•
Assist with Farrowing	•	•	•
<b>Neonatal and Young Stock Care</b>			
Establish Respiration in Newborns	•	•	•
Treat Navel Cord	•	•	•
Clip Needle Teeth	•	•	•
Dock Tails of Neonatal Swine	•	•	•
Inject Iron	•	•	•
Feed Creep/Supplement	•	•	•



# **PERFORMANCE SKILL LEVELS**

(Continued)

	GENERAL ASSISTANT/ PRODUCTION ASSISTANT	MANAGER/ASSISTANT MANAGER	OWNER/OPERATOR
<b>OTHER HEALTH/PRODUCTION PROCEDURES</b>			
Perform General Health Inspection	•	•	•
Castrate Boars	•	•	
Vaccinate Swine	•	•	•
Give Other Intramuscular or Subcutaneous Injections	•	•	•
Treat a Minor Wound	•	•	•
Move, Group and/or Sort Swine	•	•	•
Weigh Swine	•	•	•
Wean Swine	•	•	•
<b>SWINE IDENTIFICATION</b>			
Notch Ears of Neonatal Swine	•	•	•
Insert Ear Tag	•	•	•
Tattoo Swine	•	•	•
<b>PARASITE CONTROL</b>			
Control Internal Parasites	•	•	•
Control External Parasites	•	•	•
<b>PEST CONTROL IN FACILITIES</b>			
Control Rodents and Other Animal Pests	•	•	•
Control Insect Pests	•	•	•
<b>MOVE SWINE</b>			
Move Swine Short Distances	•	•	•
Move Swine Long Distances	•	•	•
<b>RESTRAIN SWINE</b>			
Restrain Young Swine	•	•	•
Snare Swine	•	•	•
<b>BREED SWINE</b>			
Manage Breeding Females		•	•
Manage Breeding Boars (Males)		•	•
Detect Estrus (Heat)	•	•	•
Test Breed Young Boars		•	•
Collect Semen		•	•

# **PERFORMANCE SKILL LEVELS** (Continued)

## **BREED SWINE** (Continued)

	GENERAL ASSISTANT/ PRODUCTION ASSISTANT	MANAGER/ASSISTANT MANAGER	OWNER/OPERATOR
Manage Pen Mating and Hand Mating		•	•
Inseminate Females Artificially		•	•
Detect Pregnancy Status via Ultrasound		•	•
<b>RECORD KEEPING</b>			
Maintain Records		•	•
Analyze Records	•	•	•

**ACCIDENT AND EMERGENCY PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Safety equipment and systems
- Safety materials and training manuals
- Safety checklists with standard operating policy and procedures
- Personal Protective Equipment (PPE)
- Material Safety Data Sheets (MSDS)
- Chemical storage and labeling policy and procedures
- Safety storage areas
- Safety signage
- Safety log
- Property forms (e.g., safety status checklist, safety violation, work order, etc.)
- First aid kit
- Disaster drill policy and procedures
- Emergency evacuation plans
- Local, state and federal regulations
- Annual Occupational Safety and Health Administration (OSHA) log of work-related employee injuries and illnesses (OSHA Log No. 200)

**WORK TO BE PERFORMED**

Maximize farm safety by identifying and eliminating potential safety hazards.

**PERFORMANCE CRITERIA**

All safety hazards that can cause injury or accidents are eliminated.  
Safety violations are reported to designated person and safety violation documentation is completed.

The skill is performed with 100% accuracy.

All breaches of safety are reported immediately. Identification of potential safety hazards is ongoing.

**PERFORMANCE ELEMENTS**

1. Post emergency plan folders for all equipment and chemicals.
2. Post list of appropriate PPE to be worn when operating equipment.
3. Clean up all spills in accordance with Environmental Protection Agency (EPA) regulations.
4. Remove all objects or spills located where they could cause injury or damage.

5. Maintain appropriate fire extinguishers and fire protection equipment according to national fire Protection Association (NFPA) standards.
  - a. Check expiration dates on fire extinguishers.
  - b. Ensure authorized service center maintains fire extinguishers yearly.
6. Store combustible materials away from ignition sources.
7. Store caustic or poisonous substances in identified storage areas.
8. Ensure required material safety data sheets are updated and easily accessible.
9. Ensure all equipment is maintained according to manufacturers' specifications.
10. Maintain evacuation equipment (e.g., flashlights, light sticks, blankets, etc.).
11. Maintain first aid kit supplies.
12. Report all safety violations to designated person.

## **PERFORMANCE ASSESSMENT CRITERIA**

OSHA and EPA standards/regulations are followed.

### **PRODUCT**

All safety hazards are identified and reported to maintenance and/or eliminated. Safety violations are logged and reported to designated staff. Appropriate procedures for extreme weather conditions are followed.

### **PROCESS**

All performance elements for maximizing farm safety are critical.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

- Power loss alarm (battery-powered)
- Standby generator
- Generator installation and safety training manual
- Manufacturer's directions
- Emergency ventilation system/plan
- Facility power outage plan
- Emergency phone numbers

**WORK TO BE PERFORMED**

Perform emergency power outage procedures to prevent swine illness/death.

**PERFORMANCE CRITERIA**

Emergency power outage procedures are followed without error.

Time required to perform emergency procedures varies according to the cause/resolution of the power outage.

**PERFORMANCE ELEMENTS**

1. Respond to alarm.
  - a. Silence alarm.
  - b. Identify cause of alarm.
  - c. Reset alarm when appropriate.
2. Create emergency ventilation.
3. Determine power outage causes.
  - a. Circuit breaker
  - b. Local power outage
  - c. Widespread power outage.
4. Contact power company.
5. Contact supervisor/manager.
6. Verify building sequence according to the power outage plan.
7. Use generator according to manufacturer's directions.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Emergency power is provided to swine buildings.

### **PROCESS**

All performance elements for providing emergency power to swine are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Property accident/incident response policy and procedures  
Accident/incident-specific checklists  
First aid kit  
Telephone  
Accident/incident report and logbook  
Disaster policy and procedures  
Emergency call lists for  
    medical services      management personnel  
    police department    emergency response team  
    fire department      ambulance services

**WORK TO BE PERFORMED**

Follow accident/incident response procedures.

**PERFORMANCE CRITERIA**

All accidents/incidents are reported to designated individual. Details of all accidents/incidents are logged and documented.

The skill is performed with 100% accuracy.

Time required to complete the skill varies depending on the information required for documentation and the type of accident/incident.

**PERFORMANCE ELEMENTS**

1. Assess accident/incident situation.
2. Determine seriousness of the accident/incident.
3. Call emergency personnel if necessary.
4. Assist each individual by most appropriate means.
5. Establish individual communication checkpoints as required.
6. Direct individuals to appropriate safe areas as required.
7. Report accident/incident to designated individual(s) or entity (e.g., worker's compensation representative, insurance provider, etc.).
8. Complete accident/incident documentation.

## **PERFORMANCE ASSESSMENT CRITERIA**

All insurance, local, state and federal regulations are followed.

### **PRODUCT**

All accident/incident reports and logs are completed and reported to designated individual or entity. Emergency personnel are contacted as required.

### **PROCESS**

All performance elements for following accident/incident response policy and procedures are critical. Performance element two is critical for determining which accident/incident response procedure(s) must be followed and who should be contacted.



**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Workplace policy and procedures  
Insurance standards/regulations  
Insurance report and claim forms  
Accident report and logbook  
Emergency call lists  
Local, state and federal laws and regulations

**WORK TO BE PERFORMED**

Submit accident reports and claims to insurance company.

**PERFORMANCE CRITERIA**

All accident reports and claims are submitted to the insurance company and filed according to the insurance company's policy and procedures.

All necessary forms are completed within 24 hours.

**PERFORMANCE ELEMENTS**

1. Notify police or emergency personnel and give details of accident/incident.
2. Report accidents/incidents to appropriate individuals.
3. Prepare accident reports and claims.
4. Complete supporting documentation (e.g., drug test for CDL licensed driver, etc.).
5. Submit completed forms to insurance company.
6. File completed forms.

**PERFORMANCE ASSESSMENT CRITERIA**

All insurance, local, state and federal regulations are followed.

**PRODUCT**

Accident reports are prepared and submitted to insurance company as required.  
Completed forms are filed accordingly.

**PROCESS**

The performance elements for submitting accident and insurance reports are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**FEEDING AND WATERING**
**SKILL STANDARD**
**CONDITIONS OF PERFORMANCE**

Given the following:

Automatic waterer  
 Manufacturer's operating manual  
 Pork Quality Assurance Handbook

**WORK TO BE PERFORMED**

Provide water to swine using an automatic system.

**PERFORMANCE CRITERIA**

A steady and adequate supply of clean, fresh water is ensured.

Swine self-water under normal circumstances.

Time required to check for cause of system failure is 1-2 minutes.

**PERFORMANCE ELEMENTS**

1. Ensure proper installation of selected type of watering system.
  - a. Insulated to prevent freezing
  - b. Properly grounded to prevent electrical shock
  - c. Height adjusted to age/size of swine
2. Ensure flow rate and supply are adequate for class of swine to be maintained.  
 It is best if water is available free choice, but needs are listed as follows:  
 (from PQA Handbook)

	<u>Flow Rate</u>	<u>Daily Water Need</u>
Weanling:	70 sec/pint	.5 gallons/day
Grower/Finisher:	50 sec/pint	1.5 to 3.5 gallons/day
Sow/Boar:	35 sec/pint	4.5 to 6 gallons/day

3. Provide water that is fresh, clean and no colder than 45° F.
4. Test water periodically for nitrate content and if suspected, bacterial contamination.
5. Check water source daily (twice daily during hot weather).
  - a. Make sure water is turned on.
  - b. Check moving parts of waterer.
  - c. Search water line for leaks and/or breaks.
  - d. Check well and well pump.
  - e. Call professional if needed.
  - f. Water swine from another source if necessary.
6. Observe appearance and behavior of swine. (Swine that are water deprived appear gaunt, restless and squeal. Dehydration can cause death of swine.)

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Swine have a steady supply of safe, fresh water.

### **PROCESS**

All performance elements for watering with automatic systems are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**FEEDING AND WATERING****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Feed specifications
- Manufacturing practices guidelines
- Standardized procedures
- Equipment for mixing feeds
- Record keeping materials
- Labeling materials
- Access to laboratory assays
- Work space and storage areas
- Appropriate housing
- Scales (if processing on-farm)
- Necessary feed products and medications
- Personal Protective Equipment (PPE)
- Food and Drug Administration (FDA) standards/regulations
- Occupational Safety and Health Administration (OSHA) standards/regulations

**WORK TO BE PERFORMED**

Mix feeds for use in facility.

**PERFORMANCE CRITERIA**

Feeds are mixed according to identified feed specifications with proper labeling and safe storage. Unsafe carryover of medicated feed products is prevented.

Feeding and feed processing is an on-going activity.

**PERFORMANCE ELEMENTS**

1. Prevent contamination by maintaining cleanliness and using designated workspaces and storage areas
2. Prevent vermin and pest contamination.
3. Check equipment to be sure it can produce medicated feeds of intended potency and purity.
4. Ensure equipment is in safe and operable condition.
5. Cover auger intakes with strong grate to prevent hands, feet and clothing from contacting the auger.
6. Ensure coworkers/other individuals are not too close before starting equipment.
7. Mix feeds to specifications.
8. Clean up spills.
9. Clean equipment to prevent contamination using standardized procedure.

10. Flush equipment by running batch of nonmedicated feeds through machine after the medicated feeds and then adding nonmedicated flush batch to medicated feed.
11. Label and store medications and medicated feeds properly.
12. Maintain written record of feed formulation and delivery location.
13. Maintain labeled samples of purchased feeds and feed ingredients until the livestock fed these batches are marketed, or for 6-12 months.
14. Store records for medicated feeds for one year after feeding, including records of medication purchases and on-farm mixing.
15. Verify feed formulation by periodical analysis.

## PERFORMANCE ASSESSMENT CRITERIA

FDA and OSHA standards/regulations are followed.

### PRODUCT

Feeds are maintained to prevent cross contamination of carryover medicated feed products and FDA inquiries can be answered by records and samples maintained.

### PROCESS

All performance elements for proper feed and feed processing are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**FEEDING AND WATERING****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Class of swine  
Feeding and nutrition guidelines (e.g., Pork Industry Handbook, National Research Council (NRC) Nutrient Requirements of Swine, nutritionist recommendations, etc.)

**WORK TO BE PERFORMED**

Select ration and formulation for class of swine to be fed including medication and other additives.

**PERFORMANCE CRITERIA**

Rations are determined and properly mixed to achieve optimal production and herd health according to the nutrition guidelines.

Selecting and formulating rations is an ongoing activity.

**PERFORMANCE ELEMENTS**

*Note: Follow specific sulfa precautions.*

1. Determine desired ration for class of swine to be fed, using guides such as those from the NRC, or rely on good commercial feed supplier, veterinarian or nutritionist.
2. Make sure feed ingredients are appropriate, clean and properly processed.
3. Consider incorporating nontraditional feeds, such as bakery wastes, potatoes and dairy excess, if economically sound and readily available.
4. Incorporate feed additives (e.g., anthelmintics [dewormers], antibiotics, arsenicals, sulfas, etc.), as recommended, to increase efficiency in production.
5. Determine swine is receiving adequate levels of nutrients and volume of feed and, if necessary, weigh and measure nutrients and feed periodically.
6. Inspect swine for problem symptoms such as diarrhea, irregular estrus, abortions or increased stillborns.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Swine fed a proper ration grow efficiently with reduced health problems and increased production.

**PROCESS**

All performance elements for selecting ration and formulation to be fed to the swine are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Appropriate waste handling equipment and tools
- Swine waste safety training manual
- Swine waste safety guidelines
- Personal Protective Equipment (PPE)
- Facility policy and procedures
- Local, state and federal standards/regulations
- Illinois Department of Agriculture (IDOA) standards/regulations

**WORK TO BE PERFORMED**

Remove waste from living area of swine.

**PERFORMANCE CRITERIA**

Swine waste is removed from living area according to facility policy and procedures, adhering to local, state and federal regulations and IDOA standards/regulations.

Time required to complete the skill varies with the size of the area to be cleaned and the amount of swine waste that has accumulated.

**PERFORMANCE ELEMENTS**

*(Note: Toxic gases such as carbon dioxide, hydrogen sulfide and ammonia may build up to lethal levels. Never enter storage tank unless absolutely necessary and then with professional assistance on site.)*

1. Utilize PPE.
2. Select equipment appropriate for size and type of area to be cleaned.
3. Review safety procedures with supervisor and follow all safety guidelines.
4. Ensure proper ventilation and airflow in areas associated with waste handling and storage.
5. Provide maximum ventilation when agitating or pumping manure.
6. Maintain increased ventilation for 1-2 days after agitation has ceased.
7. Pump when no swine is in building, if scheduling permits.
8. Remove waste from living area and dispose of according to facility policy and procedures.



**PERFORMANCE ASSESSMENT CRITERIA**

IDOA, local, state and federal standards/regulations are followed.

**PRODUCT**

Swine waste is removed from living area.

**PROCESS**

All performance elements for removing swine waste are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Environmental Assurance Program (EAP) manual
- Personal Protective Equipment (PPE)
- Swine waste handling safety training
- Record keeping system
- Waste pit (below slatted floor)
- Area (where contamination of water supply cannot occur) for piling waste
- Container for holding waste prior to disposal
- Lagoon or detention pond
- Local, state and federal standards/regulations
- Illinois Department of Agriculture (IDOA) standards/regulations

**WORK TO BE PERFORMED**

Store swine waste prior to disposal.

**PERFORMANCE CRITERIA**

Waste is stored according to IDOA standards/regulations and EPA manual information. Storage pit and lagoon are inspected and documentation is recorded every two weeks at a minimum. Other facilities and equipment require more frequent inspection.

Time required to store waste for future disposal varies according to the number of swine and size of facility.

**PERFORMANCE ELEMENTS**

*Note: Never enter storage tank unless absolutely necessary and then only with professional assistance on site.*

1. Ensure proper ventilation and air flow in areas associated with waste handling and in storage areas where toxic gases such as carbon dioxide, hydrogen sulfide and ammonia may build up to lethal levels.
2. Ensure waste material falls through slats in floor and collects in pit below.
3. Collect semisolid and liquid waste material in lagoon.
4. Place waste material in container (e.g., Slurrystore, etc.) that will prevent leakage.
5. Pile waste material (manure pack) on concrete pad or on ground away from water supply to avoid contamination.
6. Monitor waste storage, as required, and document.

**PERFORMANCE ASSESSMENT CRITERIA**

IDOA, local, state and federal standards/regulations are followed.

**PRODUCT**

Swine waste is stored in an environmentally safe manner prior to disposal.

**PROCESS**

All performance elements for storing swine waste are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Waste handling equipment
- Waste handling safety training manual
- Personal Protective Equipment (PPE)
- Certified livestock waste manager (as required)
- Additional assistants
- Comprehensive Nutrient Management Plan (CNMP)
- Livestock Management Facilities Act
- Environmental Assurance Program (EAP) manual
- Local, state and federal standards/regulations
- Illinois Department of Agriculture (IDOA) standards/regulations

**WORK TO BE PERFORMED**

Dispose of swine waste in a manner that is safe and environmentally approved.

**PERFORMANCE CRITERIA**

Waste is disposed of according to IDOA standards/regulations and EAP guidelines.  
Time required to dispose of swine waste varies according to quantity to be disposed of and method being used.

**PERFORMANCE ELEMENTS**

1. Identify guidelines of EAP manual and Title 35 (IDOA).
2. Implement Comprehensive Nutrient Management Plan (CNMP) according to Livestock Management Facilities Act.
3. Utilize PPE.
4. Prepare waste-handling equipment.
5. Enter storage tank *only when absolutely necessary* and only with adequate safety training, precautions, and equipment, and professional assistance on site.
  - a. Wear a self-contained breathing equipment and be certified in its use.
  - b. Wear safety line and work with at least two people strong enough to hoist a person out of pit if there are problems.
6. Apply waste to land according to equipment manufacturers' guidelines and a CNMP to prevent water supply contamination.

**PERFORMANCE ASSESSMENT CRITERIA**

IDOA, local, state and federal standards/regulations are followed.

Certification for use of self-contained breathing apparatus is required if storage tank is entered.

**PRODUCT**

Swine waste is disposed of in an environmentally safe manner.

**PROCESS**

All performance elements for disposal of swine waste are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Cleaning schedule
- Scrub brushes, brooms and shovels
- High-pressure washer
- Equipment safety training manual
- Adequate water supply
- Approved disinfectant for type of structure and size of swine
- Manufacturers' directions
- Personal Protective Equipment (PPE)
- National Pork Producers Council (NPPC) cleaning guidelines

**WORK TO BE PERFORMED**

Clean and disinfect swine facilities.

**PERFORMANCE CRITERIA**

The living area is cleaned and disinfected, eliminating waste, dirt and germs.

Time required to complete the skill varies depending on building size and type and number of swine living within building.

**PERFORMANCE ELEMENTS**

1. Put on PPE when entering or prior to entering building.
2. Remove as much debris as possible by scraping, sweeping and/or scooping.
3. Pre-soak area with water.
4. Clean area with pressure washer, using safety-training guidelines.
5. Rewash areas that do not seem adequately clean.
6. Follow manufacturers' directions for mixing disinfectants or use pre-mixed solutions.
7. Apply disinfectants thoroughly according to manufacturers' directions.
8. Follow manufacturers' directions regarding rinsing.
9. Allow structures to dry before bringing swine back into building.

**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Living space of swine is cleaned and disinfected.

**PROCESS**

All performance elements for cleaning and disinfecting swine facilities are critical and must be performed in sequence.

**SANITATION****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Dead swine or swine which must be euthanized  
National Pork Producers Council (NPPC) and American Association of  
Swine Practitioners (AASP) brochure/guidelines for euthanasia  
Personal Protective Equipment (PPE)  
Illinois Department of Agriculture (IDOA) standards/regulations for  
incineration, composting and/or burial  
Incinerator (with afterburner), burial sites, composting and/or carcass  
storage area

**WORK TO BE PERFORMED**

Dispose of dead swine.

**PERFORMANCE CRITERIA**

Swine carcasses are disposed of according to IDOA standards and regulations.

Time required to complete the skill varies based on the number of swine, method of disposal and pre-disposal requirements (e.g., examination, etc.).

**PERFORMANCE ELEMENTS**

1. Use NPPC and AASP guidelines to develop euthanasia action plan, considering human safety, swine welfare, practicality/technical skill required, cost, aesthetics (degree of unpleasantness to observer), limitations (e.g., size of swine, location, etc.).
2. Put on PPE.
3. Euthanise any swine that is determined by supervisor or veterinarian to be beyond recovery to a normal condition.
4. Use method of euthanasia that does not cause pain or distress to swine.
5. Determine method of disposal, based on availability and IDOA standards/regulations.
6. Dispose of carcasses following IDOA regulations.



**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Swine carcasses are disposed of in an environmentally safe and humane manner.

**PROCESS**

All performance elements for disposing of dead swine are critical and must be performed in sequence.

**FARROWING****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Disinfectant
- High pressure spray gun
- Farrowing crates
- Farrowing house with temperature between 55° and 75° F
- Non-abrasive flooring such as rubber mats for neonatal area
- Supplemental heat source such as heat lamp or heated mats
- Bedding such as straw or shavings (optional)
- Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Prepare an area for neonatal swine health, comfort and safety.

**PERFORMANCE CRITERIA**

Neonatal losses are kept to a minimum (10% or less) by providing an appropriate farrowing environment.

Time required to complete the skill varies based on conditions, but each farrowing crate area will take approximately 15-30 minutes.

**PERFORMANCE ELEMENTS**

1. Put on PPE.
2. Clean farrowing area thoroughly.
  - a. Remove organic material (e.g., feces, feed, etc.).
  - b. Use high-pressure washer to thoroughly clean area and equipment.
3. Check equipment and flooring for needed repairs and make repairs as needed.
4. Apply disinfectant to farrowing area and equipment according to manufacturers' directions.
5. Allow area to dry.
6. Prepare farrowing crates with bottom rail 8"-10" above floor and with 1½' on each side to serve as swine creep area.
7. Provide nonabrasive flooring in creep area, if needed.
8. Provide heat source (e.g., heat lamp 24"-30" above creep area floor or heated mat, etc.).
9. Maintain temperature of creep area near 90° F just prior to and following farrowing.
10. Place bedding in farrowing area and creep area if desired. (Do not use bedding in slotted floor or in other self-cleaning situations).

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

The farrowing area is suitable for the health, safety and comfort of neonatal swine.

### **PROCESS**

Performance elements 2, 4 and 5 are critical for preparing the farrowing area. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Breeding females near farrowing date  
(usually day 112 of gestation)  
Record keeping system  
Individual breeding female farrowing records  
Farrowing house  
Farrowing crate with provisions for feed and water  
Washing materials  
Farrowing ration

**WORK TO BE PERFORMED**

Manage near term breeding females.

**PERFORMANCE CRITERIA**

Breeding females farrow with minimum stress and adequate care immediately before and after farrowing.

Time required to complete the skill varies. Activities begin 3-4 days prior to farrowing.

**PERFORMANCE ELEMENTS**

1. Wash breeding female with mild cleaning solutions.
2. Move her to farrowing house and into previously disinfected and cleaned farrowing crate.
3. Feed farrowing ration from 3-4 days before farrowing and until about one week after farrowing.
4. Feed at least twice a day and have water available at all times.
5. Observe breeding females frequently (every two hours if possible) for enlarged vulvas, clear mucus from vulva, enlarged udders with a tight appearance, and restless behavior.
6. Maintain environmental temperature for sow at between 65-75°F.
7. Use creep areas to provide warmer environment for baby swine.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Breeding females are prepared for farrowing and farrow with minimum stress.

### **PROCESS**

All performance elements for managing breeding females near farrowing are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Farrowing house
- Farrowing crate
- Breeding females within three days of herd gestation length
- Breeding protocol
- Prostaglandin F<sub>2α</sub>
- Oxytocin
- Dosage recommendations
- Safety training manuals for prescription products
- Manager/veterinarian
- Disposable needle(s) (18 or 20 gauge and 1 or 1 1/2" needle)
- Sterile syringe(s)
- Handler(s)
- Tools to assist if needed, such as
  - sterile gloves
  - forceps
  - gauze pads or paper towels

**WORK TO BE PERFORMED**

Induce farrowing by injecting prostaglandin F<sub>2α</sub> into periparturient breeding females.

**PERFORMANCE CRITERIA**

Breeding females farrow under supervision at specified intervals.

Farrowing is usually induced with prostaglandin F<sub>2α</sub> within 24-36 hours of intended farrowing time.

**PERFORMANCE ELEMENTS**

*Note: Prostaglandin should be handled with caution, and not by pregnant women or asthmatics.*

1. Place properly conditioned breeding females in farrowing environment.
2. Determine herd gestation length and treat females within at least three days of normal gestation length.
3. Place needle on syringe and load syringe with recommended amount of prostaglandin F<sub>2α</sub>.
4. Inject prostaglandin F<sub>2α</sub> into neck muscle of pregnant females.
5. Wait 24 hours.

6. Observe for indications of farrowing.
7. Inject oxytocin, if needed, to aid farrowing, placental expulsion and milk letdown.
8. Assist farrowing as needed, using sleeves, lubricants, forceps and gauze or towels.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Pregnant females farrow in a supervised situation.

**PROCESS**

All performance elements for inducing farrowing of breeding females are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**FARROWING****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Farrowing females in final days of gestation (usually 114 days)  
Proper breeding environment  
Farrowing crates

**WORK TO BE PERFORMED**

Observe farrowing process and assist as needed.

**PERFORMANCE CRITERIA**

The farrowing process is monitored to assure normality and to have handler assistance available if needed.

The farrowing process, once labor begins, will usually be over within four hours.

**PERFORMANCE ELEMENTS**

1. Observe females for prelabor signs (e.g., milk droplets on teats [one may carefully squeeze teats while female is eating or resting to determine if milk is in teats]; restlessness and nesting behavior; lying down and reluctance to move and/or rapid respiration).
2. Observe females for signs of imminent farrowing or labor (e.g., lying down and straining, blood-tinged fluid coming from vulva, milk dripping from teats).
3. Observe delivery of swine. (First swine should arrive within about ½ hour from onset of labor other swine will usually arrive at about 15 minute intervals. If delivery is longer, contact supervisor.)
4. Observe swine for normal behavior (e.g., respiration [breathing], movement toward teats, movement toward warmth when not nursing) and aid as needed.
5. Observe females for expulsion of placental material (reddish membranes) at end of farrowing.
6. Observe for birth of late or last swine. Be prepared to assist in establishing breathing.
7. Remove placental membranes from crate and dispose of by incinerating or burying.
8. Make sure all swine nurse and obtain first milk (colostrum). Assist if necessary by placing swine near dam's teats.
9. Allow dam and litter to rest for a few hours, if all is normal.



## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Females farrow with minimal stress and litters have higher survival rates through receipt of needed care.

### **PROCESS**

All performance elements for observing farrowing of females are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Farrowing females
- Proper breeding environment
- Farrowing crate
- Sterile plastic sleeve
- Warm soapy water
- Sponge or paper towels
- Swine snare, forceps
- Water-soluble lubricant
- Oxytocin (preloaded syringe)

**WORK TO BE PERFORMED**

Assist with farrowing and aid in delivery and normal postnatal processes.

**PERFORMANCE CRITERIA**

More swine survive and the female has fewer traumas by providing assistance when needed.

Skill must be performed promptly and as needed.

**PERFORMANCE ELEMENTS**

1. Clean area around vulva to remove feces and other materials if assistance is to be provided.
2. Remove retained swine.
  - a. Insert your hand and arm, covered by lubricated plastic sleeve, carefully into female's reproductive tract through vulva.
  - b. Grasp swine and gently maneuver it out.
  - c. Use snare (forceps) as needed.
3. Administer oxytocin injection under direction from veterinarian or supervisor to aid expulsion of swine or placenta, or to aid milk let down. (Use oxytocin only after at least one swine has been delivered.)
4. Place newborn swine near dam's teats.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

All swine and placental material is delivered or removed from reproductive tract of female. Swine are saved through prompt assistance.

**PROCESS**

All performance elements for farrowing assistance are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Farrowing crate  
Farrowing female  
Newborn swine  
Paper toweling or clean cloths

**WORK TO BE PERFORMED**

Establish respiration in swine that aren't breathing, usually due to membranes or mucus that block breathing.

**PERFORMANCE CRITERIA**

Breathing is established in swine.

Skill must be performed within 30 seconds to 1 minute.

**PERFORMANCE ELEMENTS**

1. Observe farrowing female while standing quietly outside and behind farrowing crate.
2. Remove any swine which have membranes still over their heads or which are not moving and breathing by placing palm of hand against back of swine and gently closing fingers and thumb on opposite sides. Then lift swine out of crate.
3. Remove any membranes or mucus on swine's head by gently rubbing its head and face with toweling or cloth.
4. Rub or slap side of swine as stimulus if breathing does not occur promptly.
5. Blow air gently into newborn's nose through cupped hand, if needed.
6. Place breathing newborns under heat source by sow's teats when returning them to crate.
7. Lay swine aside for later disposal if breathing is not established.
8. Watch closely for more problems with membrane coverage and nonbreathing swine near end of farrowing.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Respiration is established in newborns.

### **PROCESS**

All performance elements for establishing respiration in newborns are critical and must be performed in sequence.

**NEONATAL AND YOUNG STOCK CARE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Newborn swine  
Clean scissors, knife or side cutters  
Antibacterial solution, such as tamed iodine  
Squeeze or spray bottle  
String or plastic clamps

**WORK TO BE PERFORMED**

Apply antibacterial treatment to navel cord of newborns to prevent infection.

**PERFORMANCE CRITERIA**

The navel cord of newborns is saturated with an antibiotic within 1-4 hours of birth, preferably immediately after farrowing process is completed.

Time required to complete the skill is 15-30 seconds.

**PERFORMANCE ELEMENTS**

1. Apply navel cord care immediately after farrowing process is completed.
2. Stand outside crate and remove swine from farrowing crate.
  - a. Place palm of hand against swine's back.
  - b. Place thumb and fingers on opposite sides of swine's neck/shoulders from back side.
  - c. Lift swine out of crate.
3. Cut off excess navel cord leaving about one inch.
4. Tie or clamp off navel cord if there is excessive bleeding.
5. Cover navel cord thoroughly with antibacterial solution by using squeeze or spray bottle. Squeeze or spray enough antibacterial solution to completely cover cord.
6. Return swine to correct farrowing crate after treatment.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Navel cords of newborns are effectively treated to prevent infections, to dry within 24 hours, and to drop off within a few days.

### **PROCESS**

All performance elements for navel cord care are critical and must be performed in sequence.

**NEONATAL AND YOUNG STOCK CARE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Neonatal swine

Teeth nippers, side-cutting pliers or toenail clippers (sharp) Disinfectant

Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Clip needle teeth to protect sow's teats and other swine. (This may be part of standard neonatal processing done on daily basis in large operations.)

**PERFORMANCE CRITERIA**

The points of needle teeth are clipped off as part of neonatal processing.

Time required to complete the skill is 30 seconds to 1 minute per swine.

**PERFORMANCE ELEMENTS**

1. Put on PPE.
2. Stand crate.
3. Reach down and place palm of your hand on swine's back or side.
4. Remove swine from crate by gently closing your thumb and fingers around body of swine then lift swine out of crate.
5. Hold swine's head by placing palm of your hand on back of swine's neck with your fingers and thumb on opposite sides of swine's jaw.
6. Avoid squeezing swine's neck and take care not to press hard enough to choke or injure swine.
7. Force mouth open, using fingers of hand holding swine, by pressing back corners of mouth.
8. Pick up clipping tool from disinfectant solution.
9. Clip teeth off (four upper/four lower) just above gum line one or two at a time.
10. Return swine to crate.
11. Return clippers to disinfectant.



**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Needle teeth of nursing swine are clipped to prevent injury to littermates and sow.

**PROCESS**

All performance elements for clipping needle teeth are critical and must be performed in sequence.

**NEONATAL AND YOUNG STOCK CARE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Neonatal swine  
Personal Protective Equipment (PPE)  
Tray with disinfectant  
Tail clipper or side cutters (sharp)  
Iodine solution

**WORK TO BE PERFORMED**

Dock (shorten) tails of neonatal swine.

**PERFORMANCE CRITERIA**

The tails of swine will be shortened to such a degree that other swine are not likely to bite them, but not so short as to damage anal tissue.

Time required to complete the skill is one minute or less.

**PERFORMANCE ELEMENTS**

*NOTE: Do not stand in same pen or crate with sow for this procedure, as she may become protectively aggressive.*

1. Put on PPE, especially hearing protectors.
2. Put tail clipper or side cutter in disinfectant on tray and place tray where tail clipper is easily reached.
3. Remove swine from farrowing crate by catching swine by its hind legs and holding in your nondominant hand at waist to chest height.
4. Take clippers in your other hand and clip to shorten tail.
5. Cut tail to a length between 1/2 original length to as short as 1/2 inch from its body. (Do not cut tail off even with body since cutting too close may interfere with normal anal function.)
6. Spray iodine solution on remaining tail.
7. Return swine to sow.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Tails of neonatal swine are docked (shortened) to a length that helps prevent tail biting.

### **PROCESS**

All performance elements for docking tails of neonatal swine are critical and must be performed in sequence.

**NEONATAL AND YOUNG STOCK CARE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Neonatal swine  
Iron solution (usually iron dextran or iron dextrin)  
Syringes, 10-20 cc (sterile, disposable preferred) or automatic syringes  
Sterilized needles:  
    20-gauge (1/2 inch in length) for injection  
    14- or 16-gauge for drawing up iron solution  
Disinfectant  
Personal Protective Equipment (PPE)  
Cotton swabs

**WORK TO BE PERFORMED**

Inject iron solution into neonatal swine to prevent anemia and improve production.

**PERFORMANCE CRITERIA**

Swine are given iron solution injections ensuring minimal stress and tissue damage.

Time required to complete the skill is one minute per swine.

**PERFORMANCE ELEMENTS**

1. Follow label instructions for volume. (Usually 100mg of iron is needed per swine).
2. Draw a few cc's of air into syringe, using 14-to16-gauge needle.
3. Turn bottle containing iron solution upside down and inject air into bottle through its rubber top.
4. Draw back syringe plunger to fill syringe with iron solution.
5. Leave 14-to16-gauge needle in bottle and place clean 20-gauge needle on syringe.
6. Hold syringe with needle up and remove excess air by slowly pushing plunger up until drop of liquid appears at top of needle. Cover needle and set it aside or have a handler prepare swine.
7. Remove swine as needed from farrowing crates.
8. Swab neck muscle with disinfectant on either side between ear and shoulder blade of swine.
9. Hold swine from front, hand around neck, just below its head. (Take care not to choke swine.)
10. Inject needle into side of swine's neck muscle while tilting head slightly away from injection site, taking care to avoid spine.
11. Repeat as needed until all swine are injected.
12. Safely dispose of or wash and sanitize all syringes and needles.

**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Swine are given iron solution injections to prevent anemia and improve production.

**PROCESS**

All performance elements for injecting iron are critical and must be performed in sequence.

**NEONATAL AND YOUNG STOCK CARE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Nursing swine
- Creep feeding areas, either as part of farrowing crate or free standing
- Feed pans or containers
- Heat mats
- Properly formulated and prepared creep feed
- References for formulation, (e.g., Nutrient Requirements of Swine from NRC, etc.)

**WORK TO BE PERFORMED**

Feed properly formulated, palatable feed to nursing swine.

**PERFORMANCE CRITERIA**

All nursing swine will readily consume creep feed, making a positive transition to weaning.

Time required to complete the skill is 1-2 minutes.

**PERFORMANCE ELEMENTS**

1. Ensure feeds are palatable and maintain nutritional and medical content.
2. Place clean feed pans in creep feeding areas accessible to nursing swine but not to sows.
3. Use pans or other creep feed containers that allow swine to reach feed.
4. Discard any unconsumed feed and incorporated waste prior to daily cleaning of creep feed containers.
5. Place fresh creep feed in pans or on heat mats daily.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Nursing swine begin consumption of feed and are weaned with better health, less stress and less production loss.

**PROCESS**

All performance elements for feeding creep/supplements to nursing swine are critical and must be performed in sequence.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

- Restrained or confined swine
- Herd protocol
- Marking chalk/paint stick
- Rectal thermometer
- Chart of normal temperature and respiration ranges
- Record keeping system

**WORK TO BE PERFORMED**

Perform general inspection of swine to assess health status.

**PERFORMANCE CRITERIA**

The swine is inspected to assess health status. Irregularities are recorded and treatment plan identified.

Time required to complete the skill varies.

**PERFORMANCE ELEMENTS**

1. Observe swine for signs of swelling in joints, limping, cuts or abrasions.
2. Separate swine with irregularities for observation and/or treatment according to herd protocol.
3. Count swine's respirations per minute to ensure they are in normal range and rhythm.
4. Report any coughing, sneezing, nasal discharge or watery eyes.
5. Verify head is up and eyes are bright and clear.
6. Verify stool is firm with no foul odor.
7. Insert a rectal thermometer and hold in place for 1-2 minutes.
8. Remove thermometer gently and read thermometer to determine if swine has fever.
9. Place paint stick mark on swine if other swine are to be inspected.
10. Update record keeping system.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

A general health inspection is given to the swine.

### **PROCESS**

All performance elements for performing general health inspections of swine are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.



**OTHER HEALTH/PRODUCTION PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Boars
- Castration knife or scalpel or side cutters (sharp)
- Liquid disinfectant
- Cotton swabs
- Needle and suture material (if needed)
- Assistant or mechanical swine holder (optional)
- Clean, draft free environment
- Work area away from sows
- Antiseptic powder or spray
- Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Castrate normal boar piglets after carefully examining scrotal area to identify potential problems such as ruptures.

**PERFORMANCE CRITERIA**

The swine is castrated with minimal stress and without loss of life.

Time required to complete the skill is about 1 minute for nursing swine with additional time required for older males.

**PERFORMANCE ELEMENTS**

1. Put on PPE.
2. Castrate nursing swine as follows:
  - a. Reach down and place palm of your hand on swine's back or side while standing outside farrowing crate.
  - b. Remove swine from farrowing crate by gently closing your thumbs and fingers around body of swine and lift out of crate.
  - c. Take swine to work area.
  - d. Place swine in mechanical swine holder or grasp swine's rear legs, both in one hand, with scrotal area easily accessible. (An assistant may be needed for larger swine.)
  - e. Scrub scrotum and surrounding area with a cotton swab soaked in disinfectant.
  - f. Apply light upward pressure to scrotal area.
  - g. Inspect outline of testicles and make sure that there are two and that they are similar in size.
  - h. Identify swine with abnormalities and contact supervisor or veterinarian.
  - i. Take knife, scalpel or side cutters in your dominant hand while holding scrotal skin tight with other hand.
  - j. Make an incision as long as testicle centered along long axis of each.

- k. Cut through skin and membrane around testicle. (It should protrude into incision.)
- l. Pull or squeeze testicle through incision and enlarge incision slightly if needed.
- m. Grasp testicle, pull gently to extend cord and sever cord.
- n. Repeat steps (j) through (m) for other testicle.
- o. Apply antiseptic to incisions.
- p. Return swine to farrowing crate.
- q. Check for excessive bleeding or tissue or intestine appearing through incision for next few hours.
  - 1. For excessive bleeding, apply blood stopping agent to the wound and leave isolated until bleeding stops.
  - 2. Contact supervisor or veterinarian if protruding intestine is observed.
  - 3. Remove any protruding nonintestinal excess tissue.
- 3. Castrate older male swine.
  - a. Restrain swine by a hog snare or by positioning on its side.
  - b. Follow steps (d) through (o) and observe and treat as described in steps (q) 1-3.
  - c. Return to clean housing.

## PERFORMANCE ASSESSMENT CRITERIA

### PRODUCT

Male swine are castrated with minimal stress and without loss of life.

### PROCESS

All performance elements for castrating boars are critical, however performance elements 2 (d) through 2 (n) must be performed in sequence.

**OTHER HEALTH/PRODUCTION PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Restrained and healthy swine
- Needle and syringe (based on swine size)
- Vaccine (based on herd health protocol)
- Pork Quality Assurance Handbook (PQA Handbook)
- Dosage chart including method recommendations
- Record keeping system
- Marking chalk/paint stick

**WORK TO BE PERFORMED**

Administer disease-preventing vaccines to swine.

**PERFORMANCE CRITERIA**

The correct dosage of vaccine is administered according to the size, condition and weight of swine and in an approved manner.

Time required to complete the skill is 30 seconds.

**PERFORMANCE ELEMENTS**

1. Assemble vaccine, correct size of needle and syringe to be used, and marking chalk and place within easy reach. (See PQA Handbook and/or manufacturer's directions).
2. Determine dosage and method of administration, according to manufacturer's, veterinarian's or supervisor's directions.
3. Mix vaccine contents thoroughly by gently agitating the bottle.
4. Pull plunger on syringe down to a level equal to amount of vaccine being removed. (Fill and set dosage for automatic syringe.)
5. Insert needle into rubber stopper in top of bottle, with bottle in an upright position.
6. Push plunger in to force air into bottle.
7. Invert bottle and syringe.
8. Slowly pull plunger down until liquid reaches appropriate dosage on syringe (or fills automatic syringe).
9. Turn bottle right side up and remove syringe and needle.
10. Invert needle and syringe and tap side of syringe gently to force air bubbles to needle's end.
11. Push plunger in until no air remains in needle or syringe and liquid can be seen at tip of needle.
12. Determine desired type of vaccine administration (see PQA Handbook).
  - a. Intramuscular:
    1. Select a site in the neck muscle just behind and below swine's ear.
    2. Insert needle firmly into muscle, taking care to avoid spine.

3. Slowly depress plunger until all vaccine is forced out (or until proper dosage in automatic syringe is administered.)
- b. Subcutaneous
  1. Use only clear areas of skin and inject needle under skin of swine's flank or elbow.
  2. Insert needle almost parallel to skin, sliding it between skin and muscle or fat.
  3. Depress plunger until all vaccine is forced out.
- c. Intranasal
  1. Remove needle and use an applicator tip once product has been drawn into syringe.
  2. Hold swine's head tilted in upright position and spray product into swine's nasal passage.
  3. Continue to hold swine's head upright for 10-15 seconds after product is administered.
13. Place paint stick mark on swine to indicate it has been vaccinated.
14. Dispose of needles and other materials properly.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Swine is vaccinated.

**PROCESS**

All performance elements for vaccine administration are critical and must be performed in sequence.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Restrained swine  
Needle and syringe  
Medication/compound  
Record keeping system  
Pork Quality Assurance Handbook (PQA Handbook)  
Marking chalk/paint stick  
Manufacturer's instructions

**WORK TO BE PERFORMED**

Treat swine with needed injections.

**PERFORMANCE CRITERIA**

The treatment is administered using the recommended method. Dosage of the correct medication is calculated based on weight, age, and type of swine.

Time required to complete the skill is one minute.

**PERFORMANCE ELEMENTS**

1. Assemble compound to be administered, correct size of needle and syringe to be used, and marking chalk, and place within easy reach. (See PQA Handbook.)
2. Determine proper dosage and method of administration.
3. Pull the plunger on syringe down to level equal to amount of medication being removed.
4. Agitate compound bottle gently to thoroughly mix contents.
5. Insert needle into rubber stopper in top of bottle while bottle is in upright position.
6. Push plunger in to force air in syringe into bottle.
7. Invert bottle and syringe.
8. Pull plunger down slowly until liquid reaches appropriate dosage indicated on syringe.
9. Turn bottle right side up and remove syringe and needle.
10. Invert needle and syringe and tap side of syringe gently to force air bubbles to needle's end.
11. Push plunger in until no air remains in needle or syringe and liquid can be seen at tip of needle.
12. Prepare to make adjustments for swine movement.
13. Select appropriate injection method and site.
  - a. Intramuscular:
    1. Insert needle firmly in neck muscle just below and behind swine's ear, making sure to avoid spine.
    2. Depress plunger until medication is forced out.

- b. Subcutaneous:
  - 1. Select a clean site at swine's elbow or flank, and slip needle between skin and muscle or fat.
  - 2. Depress plunger until medication is forced out.
- 14. Place paint stick mark on swine to indicate it has been treated.
- 15. Update record keeping system.
- 16. Dispose of needle according to manufacturers' instructions.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Swine receives the correct medication/supplements intramuscularly or subcutaneously.

### **PROCESS**

All performance elements for administering other vaccines are critical and must be performed in sequence.

**OTHER HEALTH/PRODUCTION PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Restrained swine  
Cotton swabs/gauze pads  
Antiseptic or topical antibiotic  
Antibacterial soap, warm water

**WORK TO BE PERFORMED**

Clean and treat minor cuts and abrasions.

**PERFORMANCE CRITERIA**

The wound is properly cleaned and treated to prevent infection.

Time required to complete the skill is 1-5 minutes.

**PERFORMANCE ELEMENTS**

1. Position swine to allow access to area to be treated.
2. Contact supervisor or veterinarian if wound is more serious than originally assessed.
3. Place few drops of antibacterial soap in one-half gallon of warm water.
4. Dip gauze or swabs in warm, soapy water and wash wound area thoroughly.
5. Cover wound and surrounding area completely with antiseptic spray, liquid or paste.
6. Check wound daily for signs of healing or infection.
7. Repeat steps three through six as needed.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

The wound heals quickly and without infection.

**PROCESS**

All performance elements for treating minor wounds are critical and must be performed in sequence.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Swine  
Hurdle and/or gates  
Marking chalk or spray  
Brooms  
Paddles  
Bushel baskets  
Verbal/written instructions  
Farm management procedures  
Prepared desired location  
Record keeping system  
Safety training guidelines  
Pork Quality Assurance Handbook (PAQ Handbook)  
National Pork Producers Council (NPPC) Swine Handling Video

**WORK TO BE PERFORMED**

Move, group and/or sort swine.

**PERFORMANCE CRITERIA**

Swine is relocated according to verbal/written instructions.

Time required to complete the skill varies according to number of swine.

**PERFORMANCE ELEMENTS**

*Note: Swine should always be handled as if they are potentially aggressive.*

1. Adhere to procedures identified on (NPPC) Swine Handling Video.
2. Isolate newly acquired swine until they can be checked for disease and processed according to routine farm management procedures.
3. Identify proper handling methods to prevent injury to handler and/or swine.
4. Identify methods to handle encounters with an aggressive swine.
5. Remain calm, quiet, patient and organized while moving swine.
6. Place hurdles and secure gates throughout facilities.
7. Obtain any other tools needed.
8. Regulate common herd behavior (e.g., attempting to return to herd; reluctance to step from dark areas into bright sunlight; willingness to go from dark areas toward lighted areas; desire to return to familiar areas; willingness to move in a group; resistance to being forced to move individually).
9. Use hurdles as usual tool to move swine, with brooms or paddles as supplemental tools for fine swine control.



10. Use a broom, hurdle, or bushel basket to get swine to move back.
11. Make sure objects and people are positioned in such a way to enhance instead of block flow of swine.
12. Use marking chalk or spray to individually mark swine for later sorting or grouping.
13. Group market swine in uniform size lots.
  - a. Sort weaned or feeder swine according to weight and sex.
  - b. Groups of 20-100 swine at weaning.
  - c. Group according to pen design as they approach market weight.
14. Group weanling swine (preferably with no more than 8 days difference in age) farrowed within a 2-3 week period if grouping by the all-in, all-out method

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Swine is moved with minimal stress and sorted into appropriate groups.

### **PROCESS**

All performance elements for moving, grouping and sorting swine are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**OTHER HEALTH/PRODUCTION PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Swine  
Scales  
Record keeping system  
Marking chalk/paint stick  
Gates and hurdles  
Assistant  
Instructions

**WORK TO BE PERFORMED**

Record the weight of each swine or group.

**PERFORMANCE CRITERIA**

Collect weight and identity of swine/group and record that information according to instructions.

Time required to complete the skill is 1-2 minutes per swine/group.

**PERFORMANCE ELEMENTS**

1. Set up scales in a location with easy access to swine. (An alley works well to sort and funnel swine to scales.)
2. Make sure the scales are in balance.
3. Sort and place one swine/group on weighing device, using assistance, if needed.
4. Record weight and identity of swine/group when stationary.
5. Place a paint stick mark on the swine/group after weighing.
6. Remove the swine/group from the scales, using assistance if needed.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

An accurate weight of the swine/group is determined and recorded.

**PROCESS**

All performance elements for weighing swine are critical and must be performed in sequence.

**OTHER HEALTH/PRODUCTION PROCEDURES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Personal Protective Equipment (PPE)
- Nursing swine suitable for weaning
- Cart(s) for moving swine
- Housing previously cleaned and disinfected
- Creep feeder
- Comfort mats
- Feeders and waterers
- Vaccination procedures
- Environmental management policy
- Facility policy and procedures
- Industry guidelines

**WORK TO BE PERFORMED**

Wean swine of suitable health before grouping in pens by sex and size.

**PERFORMANCE CRITERIA**

Swine make the transition from nursing to eating from feeders and being without their dams with minimal stress and remaining in good health.

Time required to complete the skill depends on number of swine to be weaned and distance to new housing.

**PERFORMANCE ELEMENTS**

1. Offer small amounts of fresh creep feed when swine reach seven days of age in a creep area not available to the sow.
2. Discard any feed not consumed and wash feeders as needed, resupply daily.
3. Ensure area where swine will be housed is cleaned and disinfected in advance so that area is dry.
4. Pre-warm area and maintain temperature according to environmental management policy.
5. Provide at least one feeder hole per 4 swine and one waterer per 10-20 swine.
6. Determine which swine will be weaned according to management protocol.
7. Closely observe swine about to be weaned. Wean and group only those in good health and satisfactory condition.
8. Put on PPE, especially hearing protection.
9. Wean by removing swine from their dam at time that is consistent with the available facilities and management policy, commonly removing healthy swine at 10-12 pounds of weight and/or 2-3 weeks of age.
10. Place swine selected into cart, weigh and record weight, and transport to new housing.

11. Stimulate feed intake by multiple feedings on comfort mats and provide ad libitum at feeder.
12. Observe swine closely for one week.
13. Use medicated water as per herd health protocol.
14. Direct the manager's attention to any swine that are lethargic or otherwise seem to be unhealthy.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Swine are weaned with minimal stress and without loss of condition.

**PROCESS**

All performance elements for weaning swine are critical and must be performed in sequence.

**SWINE IDENTIFICATION**

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Neonatal swine  
Personal Protective Equipment (PPE)  
Ear notcher  
Universal ear notching numbering system  
Disinfectant-filled tray  
Antiseptic spray  
Litter records  
Record keeping system  
Pen or pencil  
Blood-stopping agent

**WORK TO BE PERFORMED**

Notch ears of individual swine and/or litters for identification.

*Note: Ear notching may be part of general processing procedures but is usually done as one of final procedures due to greater risk of bleeding.*

**PERFORMANCE CRITERIA**

Notches are placed in readable, consistent sites on the swine's ear.

Time required to complete the skill is two minutes per swine.

**PERFORMANCE ELEMENTS**

*NOTE: Do not ear notch in pen or crate, as sows may be protectively aggressive.*

1. Review notching system to be used.
2. Put on PPE.
3. Bring entire litter to be processed to work site.
4. Separate sexes, if necessary, for recording purposes.
5. Plan to notch replacement gilts first (if separating sexes) to allow a lower, easier to read number.
6. Compare litter and litter records of swine to be notched.
7. Hold swine just below jawbones, placing your thumb on one side and fingers on other, and allow gravity to help keep swine in place.
8. Hold tightly enough to prevent swine from escaping but do not restrict breathing or cause bruising.

9. Take ear notcher from tray with your dominant hand, check number intended and proceed to notch ear as follows:
  - a. Notch litter number in swine's right ear.
  - b. Notch individual number in swine's left ear.
  - c. Avoid notching excessively close to head as this makes future reading difficult.
  - d. Notch carefully when near tip of ear.
10. Check notch and number for corresponding correctness.
11. Correct notching errors, if possible; otherwise record mistakes.
12. Spray with topical antiseptic spray.
13. Update record keeping system.
14. Return finished litter to pen.
15. Apply blood-stopping agent if bleeding continues beyond a few minutes.
16. Observe for infection and treat with antibiotics if needed. Healing should be complete in 10 days or less.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

The individual swine or litter receives permanent proper identification.

### **PROCESS**

All performance elements for notching ears of neonatal swine are critical and must be performed in sequence.

**SWINE IDENTIFICATION****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Swine
- Ear tags
- Ear tag location
- Ear tag applicator, disinfected and cleaned
- Disinfectant/antiseptic
- Cotton swabs
- Ink or pen for marking tag, if needed
- Restrained swine, snare or narrow chute
- Container for tags
- Record keeping system
- Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Insert ear tags for long term identification purposes.

**PERFORMANCE CRITERIA**

Ear tags are placed in the identified location ensuring minimal bleeding and no subsequent infection.

Time required to complete the skill is 1-3 minutes per swine.

**PERFORMANCE ELEMENTS**

1. Place all ear tags within handler's reach and within working distance of restrained swine, and maintain cleanliness.
2. Label tags unless preprinted for identification.
3. Insert tag into applicator.
4. Put on PPE.
5. Use disinfectant/antiseptic on cotton swab to clean tagging site in ear, select area free of blood vessels, between cartilage ridges approximately halfway into ear.
6. Stretch ear tight and hold it for tag application.
7. Use quick and accurate process to insert tag, numbered side up, according to manufacturer's directions.
8. Disinfect ear tag applicator between each use.
9. Record number as needed for identification.
10. Return swine to pen.
11. Observe swine daily; watch for signs of infection.
12. Treat swine with antibiotics if an infection appears severe or persists for several days. Normal healing should occur in 10 days or less.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

An ear tag is inserted for identification.

### **PROCESS**

All performance elements for ear tag insertion are critical and must be performed in sequence.



**SWINE IDENTIFICATION****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Tattoo marker (pliers-type or hammer-type)
- Restrained swine
- Inkpad
- Tattoo ink or paste
- Cardboard
- Assistant
- Personal Protective Equipment (PPE)
- Identification system
- Record keeping system
- Cloths or paper towels
- Soapy water
- Alcohol

**WORK TO BE PERFORMED**

Tattoo swine for identification purposes.

**PERFORMANCE CRITERIA**

Swine's skin is tattooed with readable and permanently imprinted tattoos.

The tattoo number is recorded with 100% accuracy.

Time required to complete the skill is 1-3 minutes, a body tattoo takes 30 seconds to 1 minute per swine.

**PERFORMANCE ELEMENTS**

1. Establish identification system.
2. Place all tattoo materials within easy reach.
3. Arrange and insert numbers in the correct order in marker.
4. Make test imprint on piece of cardboard to assure correct functioning.
5. Prepare record keeping system and check each number before tattooing.
6. Dip tattoo marker and number in alcohol.
7. Tattoo ears.
  - a. Clean inside of ear with towels or cloths made damp with soapy water.
  - b. Wipe inside of ear with alcohol.
  - c. Ink location in ear where tattoo is to be applied.
  - d. Ink tattoo marker thoroughly.
  - e. Hold desired ear in your hand, pressing with your fingers so inside surface is available for tattoo marker.

- f. Select an area between ear cartilage ribs, avoiding blood vessels and ear tip.
- g. Place tattoo marker in ear, placing needle side on inside (either inside or out may be used for white swine), and press handles of tattoo marker together firmly to force ink into ear, release after imprinting.
8. Tattoo body.
  - a. Use an inkpad or otherwise cover points of tattoo hammer with ink.
  - b. Drive points of tattoo hammer into shoulder, ham or belly by swinging hammer into desired site with enough force to imprint ink but not damage muscle tissue.
9. Record tattoo number and other information.
10. Repeat steps 3 through 9, selecting step 7 or 8 for chosen method.

## PERFORMANCE ASSESSMENT CRITERIA

### PRODUCT

All swine are given permanent readable tattoos.

### PROCESS

All performance elements for tattooing swine are critical. Within each method, performance elements must be performed in sequence.

**PARASITE CONTROL****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Swine
- Pork Quality Assurance Handbook (PQA Handbook)
- Herd health protocol
- Snare, chute or alley
- De-worming products appropriate for size and type of swine (feed additives, water soluble compounds, injectable compounds)
- Confinement area
- Needle and syringe (if injectable)
- Delivery system for feed and water
- Marking chalk or paint stick
- Protective gloves (if needed)

**WORK TO BE PERFORMED**

Treat swine to remove/reduce internal parasites.

**PERFORMANCE CRITERIA**

Swine are effectively treated to remove/reduce internal parasites.

Time required to complete the skill is 30 seconds to 1 minute for injections. Feed additive or water soluble products are ingested when feed or water is consumed.

**PERFORMANCE ELEMENTS**

1. Identify required dosage and delivery method of product.
  - a. Feed additives
    1. Sprinkle additive as listed on package.
    2. Mix into feed at appropriate rate.
  - b. Injectable compound
    1. Determine proper dosage (usually based on weight).
    2. Draw required dosage from bottle with correct size needle and syringe. (See PQA Handbook.).
    3. Restrain swine to be treated using a snare, chute or alley.
    4. Administer the injection according to manufacturer's directions.
    5. Mark swine with paint stick to indicate it has been treated.
    6. Release swine.
  - c. Water soluble
    1. Place water soluble product into water supply.
    2. Use recommended product dosage for consumption by swine.
2. Record identity of each swine treated, product used and date treatment was administered.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Various compounds are given to swine to reduce or remove internal parasite load. Swine health and production are improved.

**PROCESS**

Performance element 1 is critical. The size, age, and condition of swine determine which product to select and treatment method to use. The performance elements must be performed in sequence for each treatment method selected (feed additives, injectable compounds, water soluble compounds.)

**PARASITE CONTROL****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Appropriate insecticide/pesticide (oral, injectable, dust-on, pour-on or spray-on)
- Applicator/operator license (if required)
- Manufacturers' specifications and directions
- Herd health protocol
- Hand-held sprayer
- Restrained swine
- Personal Protective Equipment (PPE)
- Pork Quality Assurance Handbook (PQA Handbook)
- Record keeping systems
- Environmental Protection Agency (EPA) standards/regulations

**WORK TO BE PERFORMED**

Apply appropriate insecticide/pesticide to swine to control external parasites.

**PERFORMANCE CRITERIA**

Insecticide/pesticide is applied to swine at the recommended levels according to herd health protocol.

Time required to complete skill varies based on the number of swine being treated and the type of treatment being administered.

**PERFORMANCE ELEMENTS**

1. Determine desired pesticide and method of application, and assemble appropriate equipment or materials.
  - a. Oral (feed additives)
    1. Sprinkle additive as listed on package.
    2. Mix additive into feed according to manufacturer's guidelines.
  - b. Injectable
    1. Select needle and syringe according to PQA Handbook.
    2. Load syringe with appropriate amount of injectable solution.
    3. Administer solution according to manufacturer's guidelines.
  - c. Dust-on or pour-on
    1. Put on PPE.
    2. Apply recommended levels of pour-on or dust-on pesticide directly to the swine, following manufacturer's guidelines.
    3. Spray each swine thoroughly with recommended dosage.
  - d. Spray-on
    1. Put on PPE.
    2. Mix the pesticide according to the manufacturer's guidelines.
    3. Spray each animal thoroughly with the recommended dosage.

2. Conform to EPA standards/regulations regarding pesticide use.
3. Update record keeping system.

## **PERFORMANCE ASSESSMENT CRITERIA**

EPA standards/regulations are followed.

Applicator/operator license (if required).

### **PRODUCT**

External parasites are controlled to improve swine health and production.

### **PROCESS**

All performance elements for controlling external parasites are critical. The performance elements for selected method (oral, injectable, dust-on, pour-on or spray-on) must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Conventional rodent traps
- Live traps
- Bait stations
- Manufacturer's instructions
- Safety guidelines
- Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Eliminate and prevent return of rodents and other animal pests to facility.

**PERFORMANCE CRITERIA**

Animal pests are removed humanely and efficiently from swine facility.

Time required to complete the skill is 1-2 hours per week.

**PERFORMANCE ELEMENTS**

*Note: Be certain that swine, pets and children do not have access to bait stations.*

1. Inspect building(s) and area around building(s) for signs of rodents and other animal pests, such as
  - a. Freshly dug earth,
  - b. Holes or tunnels,
  - c. Holes chewed in building material,
  - d. Rodent animal waste or droppings, and
  - e. Footprints.
2. Identify type(s) of pests in or near building(s).
3. Place live traps and conventional traps in areas pests frequent or use for travel lanes.
4. Put on PPE.
5. Place bait stations in areas where evidence of pests is found.
6. Check live traps and bait stations on a daily basis.
7. Empty traps in an appropriate location and dispose of dead rodents properly.
8. Replenish bait stations as needed, increasing amount of bait if all bait has been eaten.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Rodents and other animal pests are controlled in and around facility.

### **PROCESS**

All performance elements for eliminating rodents are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.



**PEST CONTROL IN FACILITIES****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Any of the following individually or combined:

- Fly/pest strips
- Insecticide sprays and sprayers/dispensers
- Fly predators or other biological controls
- Insecticide poisons or bait stations
- Feed products containing insecticides
- Manufacturers' directions
- Facility policy and procedures
- Personal Protective Equipment (PPE)
- EPA standards/regulations
- IDOA standards/regulations

**WORK TO BE PERFORMED**

Control insect pests in and around swine living area.

**PERFORMANCE CRITERIA**

Insect pest populations are controlled according to facility policy and EPA and IDOA standards/regulations.

Time required to complete the skill is ten minutes to three hours per week.

**PERFORMANCE ELEMENTS**

1. Begin fly and insect control just before fly season and maintain control throughout season.
2. Follow manufacturer's directions for safe use and handling.
3. Put on PPE.
4. Place pest strips, bait and bait stations where swine, pets and children **do not** have access to them.
5. Maintain pest strips, bait and bait stations (e.g., replace, refill or repair, etc.).
6. Mix and use insecticide sprays as needed and according to manufacturers' directions.
7. Place feed products containing insecticides where swine will consume them.
8. Release fly predators at onset of fly season and as recommended thereafter.

**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Flies and other insect pests are controlled.

**PROCESS**

The performance elements are numbered to show an appropriate sequence for controlling insect pests; however, the sequence will vary according to the control method(s) selected.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Pen/area  
Instructions  
Gates  
Hurdle  
Cart  
Pork Quality Assurance Handbook (PQA Handbook)  
NPPC Swine Handling Video

**WORK TO BE PERFORMED**

Move swine from one area or pen to another.

**PERFORMANCE CRITERIA**

Swine is safely relocated to area as instructed.

Time required to complete skill varies based on distance and number of swine being moved.

**PERFORMANCE ELEMENTS**

1. Separate or segregate swine to be moved using hurdles as needed.
2. Arrange gates or panels in a line and securely fasten them if they are to be used as an alley.
3. Remain quiet, calm, patient, and organized.
4. Drive swine gently down alley to new location.
5. Drive swine short distances on foot, from location to location, using a hurdle to guide them.
6. Load small swine into carts to move to desired site.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Swine are relocated to desired location.

**PROCESS**

All performance elements for moving swine short distances are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, the sequence may vary.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Cart  
Trailer  
Tractor or truck  
Loading chute, ramp or alley way  
Hurdle/gates  
Additional handler(s)  
Destination  
Biosecurity protocol  
Pork Quality Assurance (PQA) Handbook  
NPPC Swine Handling Video  
NPPC Swine Transport Video

**WORK TO BE PERFORMED**

Transport swine long distances.

**PERFORMANCE CRITERIA**

Swine are moved to destination with minimal stress and injury.

Time required to complete the skill varies based on number of swine and distance to be moved.

**PERFORMANCE ELEMENTS**

1. Prepare provisions for the swine's comfort, such as wet shavings or sand, in bottom of truck in hot weather; use dry shavings or straw in cold weather.
2. Use a loading chute or ramp of 20° or less, if needed, to get the swine up on the cart or trailer.
3. Back up the cart or trailer to opening through which the swine will exit and open the cart or trailer door.
4. Spray swine with water. (Load early, if possible, in hot weather).
5. Open gate or door of holding area.
6. Remain calm, patient and organized while moving swine.
7. Direct groups of 3-5 swine through exit opening using hurdles and gates.
8. Direct remaining groups until all swine are loaded into cart or trailer.
9. Close gate to cart or trailer.
10. Close gate to pen.
11. Transport swine to destination.
12. Unload swine promptly and calmly into receiving area at destination site.
13. Follow biosecurity protocol.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Swine is moved to their destination safely and with minimal stress.

### **PROCESS**

All performance elements for moving swine long distances are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Young swine weighing up to 50 pounds  
Confinement area (12'x12' or smaller)  
Hurdles  
Verbal/written Instructions  
Personal Protective Equipment (PPE)

**WORK TO BE PERFORMED**

Restrain young swine weighing 50 pounds or less when performing various procedures.

**PERFORMANCE CRITERIA**

Swine is restrained without injury when performing health and productive procedures.

Time required to complete the skill is 30 seconds to 2 minutes.

**PERFORMANCE ELEMENTS**

1. Utilize PPE, especially when planning to hold swine by forelegs.
2. Restrict swine's movement.
  - a. Spread arms approach swine quietly.
  - b. Drive swine into corner.
3. Grasp swine firmly by one hind leg and lift hindquarters off of ground with one or both hands.
4. Restrain swine on its side:
  - a. Grasp one hind leg of swine with one hand and grasp its front leg on same side your other hand.
  - b. Lift swine off of floor while turning its back toward you, and gently place it back on floor on its side.
  - c. Bring rear and front leg slightly toward each other.
  - d. Place your knee and shin gently on swine's side, using enough pressure to keep swine pinned to floor, but **not** applying enough pressure to cause injury.
5. Restrain swine by holding front legs.
  - a. Grasp one hind of swine with one hand and grasp its front leg on same side with your other hand.
  - b. Maneuver your body into a position where you can release swine's hind leg and reach over swine's back and grasp remaining foreleg using your legs as a block.
  - c. Hold upper portion of swine's foreleg, lift swine off of ground, and bring swine's back toward your legs.

- d. Apply pressure to swine's back and sides with your legs to restrain swine and support yourself. Hold swine in upright position with swine's rear feet off ground.
- e. Release swine after completion of these procedures.
- 6. Restrain swine by holding rear legs.
  - a. Grasp swine's hind leg(s) and reposition your hands so that swine's right leg is in your left hand and swine's left leg is in your right hand (hands will be crossed).
  - b. Lift swine off of ground and turn swine so its back is against your legs, with its snout down and away from your legs.
  - c. Use your legs to put pressure on swine's back and sides, using enough pressure to restrain swine, but not enough to cause injury.
  - d. Release swine after completion of procedures.

## PERFORMANCE ASSESSMENT CRITERIA

### PRODUCT

Young swine are restrained for health and management procedures.

### PROCESS

All performance elements for restraining young swine are critical. The method of restraint chosen will depend on the procedures to be performed. Within each method, the steps must be performed in sequence.

**RESTRAIN SWINE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Hog snare (hand or rope)  
Swine  
Small work area (12'x12' pen or smaller)  
Hurdle  
Personal Protective Equipment (PPE)  
Restraint video

*Note: Larger swine, especially those over 400 pounds, will need a rope snare, tied to an immobile object such as a fence post. Handler size and strength should also be considered.*

**WORK TO BE PERFORMED**

Snare swine for restraint.

**PERFORMANCE CRITERIA**

Swine is caught and restrained promptly ensuring minimal discomfort.

Time required to complete the skill is one minute.

**PERFORMANCE ELEMENTS**

1. Put on PPE.
2. Approach swine quietly, toward its forequarters, pressing next to side wall or corners by using holder's legs or a hurdle.
3. Extend loop of hand snare 4"-6".
4. Hold handle of snare in one hand and guide loop into swine's mouth and over nose (upper jaw), making sure loop is above tongue. Pull snare back into swine's mouth.
5. Pull loop tightly by simultaneously pulling upward on snare handle and pushing downward on barrel of snare.
6. Hold or tie down swine for performance of procedure(s).
7. Release swine upon completion of procedure(s) by loosening loop.



**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Swine are restrained with minimal trauma.

**PROCESS**

All performance elements for snaring swine are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Breeding females
- Breeding protocol
- Feed ration formulated for age and use
- Vaccines
- Herd health protocol
- Housing with provisions for environmental control
- Pork Quality Assurance Handbook (PQA Handbook)
- Pork Industry Handbook
- National Pork Producers Council (NPPC) Swine Care Handbook

**WORK TO BE PERFORMED**

Manage breeding females.

**PERFORMANCE CRITERIA**

Breeding females are maintained for optimal health and breeding activity according to industry standards.

Gilts gain 70-100 pounds and sows gain 50-75 pounds during gestation.

Time required to complete the skill varies based on the number of females and the activities required.

**PERFORMANCE ELEMENTS**

1. Select breeding females weighing 150-200 pounds.
2. Isolate and acclimate new swine for 30-60 days, housing them in clean and disinfected quarters a minimum of 200-300 yards from entering operation.
3. Provide blood testing of breeding females after 30 days to detect pseudorabies and/or brucellosis.
4. Vaccinate and treat breeding females for parasites prior to breeding and during gestation and according to supervisor or veterinarian recommendations. Follow PQA Handbook and herd health protocol.
5. Allow breeding females to have fence-line contact with boars after negative test results to increase expression of estrus.
6. Breed females according to breeding protocol.
7. Determine pregnancy status.
8. Provide free access to water, as most sows need 4.5 gallons of water per day in gestation and 6 gallons per day while lactating. More water is required for large litters.

9. Feed on a limit-feed basis (usually about 4-6 pounds per day of a 14%-16% protein feed) in individual feeders while growing or in early gestation. (Some females may need more.)
10. Increase feed (flush) to breeding female by 50%-100% for a minimum of 2 weeks before breeding.
11. Return to limit feeding after breeding.
12. Feed 4-5 pounds of feed per day during first two-thirds of gestation and adjust for proper body condition score.
13. Feed about six pounds of feed per day during late gestation and adjust for proper body condition score.
14. Provide pre-farrowing diet a few days before and a week after farrowing, if desired.
15. Manage farrowing according to farm protocol.
16. Maximize milk production by providing a maintenance plus diet based on size of lactating female and size of litter. Feed breeding females 2-4 times per day.
17. Provide evaporative or fan-driven cooling to avoid overheating when temperatures rise above 85°F.
18. Observe daily for injury or illness and treat promptly.

## PERFORMANCE ASSESSMENT CRITERIA

### PRODUCT

Proper management of breeding females ensures that they are in good health, grow adequately, are good producers, and breed and farrow successfully.

### PROCESS

All performance elements for managing breeding females are critical. The performance elements are numbered to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Boars
- Feed rations formulated for age and use
- Vaccines
- Herd health protocol
- Housing
- Pork Quality Assurance Handbook (PQA Handbook)
- Pork Industry Handbook
- National Pork Producers Council (NPPC) Swine Care Handbook

**WORK TO BE PERFORMED**

Manage breeding boars.

**PERFORMANCE CRITERIA**

Boars are maintained for optimal health and breeding activity.

Time required to complete the skill varies based on the number of boars and the activities required.

**PERFORMANCE ELEMENTS**

*Note: Boars should always be handled as if they are potentially aggressive.*

1. Review industry care procedures.
2. Select new boars 45-60 days before their intended use in order to check and condition them.
3. Purchase boars from validated brucellosis and pseudorabies-free herd and test for negative results before breeding.
4. Isolate and acclimate new boars for 30-60 days, housing them in clean and disinfected quarters a minimum of 200-300 yards from entering operation.
5. Provide blood testing of boars after 30 days to detect brucellosis and pseudorabies.
6. Vaccinate and treat boars for parasites prior to breeding according to supervisor or veterinarian and herd health protocol.
7. Pen boars separately unless they will be turned in together with group of breeding females, in which case boars should be penned together.
8. Test-mate any young, untried boars, if necessary.
9. Revaccinate boars according to herd health protocol established in consultation with veterinarian.

10. Provide dry, comfortable housing with feed and water.
  - a. Feed young boars 5-6 pounds and older boars about 5 pounds of a 14% protein feed, and adjust feed as needed to keep boar in a body condition that is neither thin nor fat. Up to 8 pounds of feed per day may be needed during heavy natural breeding use.
  - b. Provide free access to water, if possible, as boars need a flow rate of about 1.2 pints per minute.
11. Observe boars daily for injury or illness and treat promptly.
12. Report concerns or abnormalities to supervisor and/or veterinarian.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Proper management of boars ensures they are in good health and ready to breed.

### **PROCESS**

All performance elements for managing breeding boars are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Breeding females  
Pen or alley  
Enclosed area  
Boar(s)

**WORK TO BE PERFORMED**

Detect estrus (heat) in females for natural breeding, artificial insemination or scheduling of breeding.

**PERFORMANCE CRITERIA**

Sexual receptivity is determined to make breeding safer, allow more effective use of breeding males and provide proper timing for artificial insemination.

Full estrus is detected in females without error.

Time required to complete the skill is 1-3 minutes.

**PERFORMANCE ELEMENTS**

1. Pen or move female down an alley next to a boar. (Females in estrus stop to stand along fence next to boar.)
2. Observe vulva (external reproductive tract opening) for swelling and a darker pink coloring to detect estrus.
3. Evaluate female further by pressing heavily or sitting on her back to see if she will stand rigidly.
4. Observe female's ears for an upright and alert position while pressing or sitting on her back.
5. Record females in estrus.
6. Return female to usual housing if estrus is not detected and check again in 12-24 hours.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Sexual receptivity (heat) of breeding females is determined, allowing them to be bred at the right time for conception.

### **PROCESS**

Performance elements three and four are critical steps for determining that the female is in full estrus (heat) and ready to breed. The performance elements are number to show an appropriate sequence for completing the skill; however, a different sequence may be used.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Young boar, 7-8 months of age  
Breeding female in estrus (heat)  
Breeding pen  
Hurdle

**WORK TO BE PERFORMED**

Test breed new natural service boars to determine fertility and provide experience.

**PERFORMANCE CRITERIA**

The young boar is assisted in achieving a positive breeding experience and in entering, inseminating and impregnating the breeding female.

Time required to complete the skill depends on the amount of assistance needed and the boar's libido (sex drive). Ejaculation will take 5-7 minutes.

**PERFORMANCE ELEMENTS**

*Note: Boars should always be handled as if they are potentially aggressive.*

1. Direct breeding female to a breeding pen adjacent to boar, using hurdle as necessary.
2. Observe boar for interest and use hurdle to bring boar to pen.
3. Assist boar as needed, but do not hit or injure him.
4. Move boar, if he incorrectly mounts female from front, by using hurdle to gently push him off front end and direct him toward rear of breeding female. You may also push his rear legs toward rear end of breeding female.
5. Inspect boar's ability to enter vulva of breeding female.
6. Note and report any abnormalities exhibited by boar, such as a limp, deflected (tied) or infantile penis.
7. Allow boar to complete ejaculation and dismount.
8. Return swine to their respective housing.
9. Repeat breeding process using 2-3 breeding females per week.
10. Observe or perform ultrasonography on breeding female to determine pregnancy status.
11. Collect semen sample for a quality check, if possible.
12. Cull any boars that fail to impregnate a high percentage of breeding females or who have poor semen quality.



## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Young boars with good libido, semen quality and ability to impregnate are added to the breeding herd.

### **PROCESS**

All performance elements for test breeding young boars are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Boars
- Container(s) for semen collection, (e.g., plastic beakers, Thermos, styrofoam cups, etc.)
- Handling instructions for semen
- Vinyl gloves
- Sterile, nonspermicidal lubricant
- Phantom mount (dummy) covered with vinyl, rubber or carpet and constructed to general height and width of sow (often a padded segment of log).
- Urine from estrous females or other mature boars
- Collection area with handler-escape provisions
- Nonslip footing or rubber mat
- Sorting boards
- Assistant handlers as needed
- Filters and extenders (optional)
- National Pork Producers Council (NPPC) Safe Handling Guidelines

**WORK TO BE PERFORMED**

Collect semen from boars for use in artificial insemination.

**PERFORMANCE CRITERIA**

Semen is collected from boars.

Time required to complete the skill, from time of mounting, is usually 5-10 minutes.

**PERFORMANCE ELEMENTS**

*Note: Boars should always be handled as if they are potentially aggressive.*

1. Prepare collection vessel.
2. Place phantom mount (dummy) in collection area, making sure footing is not slippery.
3. Put on vinyl gloves.
4. Have second handler bring boar to collection area.
5. Allow experienced boars to mount dummy. Train inexperienced boars to mount dummy by sprinkling urine from estrous female or other mature boar on its cover and allow boar to mount.
6. Take spiral glans penis in gloved hand and apply gentle pressure to ridges on end of penis.
7. Allow boar to fully extend and begin ejaculation.

8. Hold collection container under end of penis to collect ejaculate and allow semen to collect in container.
9. Process semen as instructed and store properly until needed for insemination.
10. Analyze semen on farm or send to a laboratory for periodic analysis for concentration, morphology, motility, volume and bacteriology.
11. Collect semen up to three times per week, no more than once every other day if collecting on a long-term basis.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Semen is collected for use in artificial insemination.

### **PROCESS**

All performance elements for collecting semen from breeding young boars are critical and must be performed in sequence.

**SKILL STANDARD**

**CONDITIONS OF PERFORMANCE**

Given the following:

Experienced breeding boar(s)  
Breeding females  
Breeding pen(s) with nonslip flooring  
Pork Industry Handbook

**WORK TO BE PERFORMED**

Mate boars and breeding females in a safe and efficient manner.

**PERFORMANCE CRITERIA**

Boars should be mated to a reasonable number of breeding females with 90% or better conception rates.

Services are completed according to Pork Industry Handbook.

Pen mating will allow about 12 services in a four-week period, while hand mating allows approximately 16 services in a four-week period.

**PERFORMANCE ELEMENTS**

*Note: Boars should always be handled as if they are potentially aggressive.*

1. Match breeding swine by size.
2. Proceed as follows for pen mating:
  - a. Remove any debris from mating pen.
  - b. Place breeding females expected to soon be in heat into pen. Place up to 10 females in pen for boars between 8 and 12 months; place up to 12 females for older boars.
  - c. Place boar in pen with breeding females.
  - d. Allow mating to occur naturally.
  - e. Record matings witnessed.
  - f. Rotate boars among pens every 24 hours to maintain high conception rates and large litters/breeding efficiency.
  - g. Maintain swine in pen(s) for up to four weeks to ensure high conception rates.
3. Proceed as follows for hand mating:
  - a. Remove any debris from breeding pen.
  - b. Place a single female in heat in mating pen.
  - c. Place boar in pen with female.
  - d. Allow mating to occur naturally. Carefully assist as necessary.
  - e. Use boars between 8 and 12 months of age once a day and up to 5 services per week; use older boars up to twice a day with a limit of 7 services per week.

- f. Record breeding information.
- g. Return each swine to its usual housing.
- h. Repeat matings as necessary while female is in heat, usually  
2-3 services per heat at 12-24 hour intervals.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Boars are utilized efficiently and mated to breeding females to produce large litters.

### **PROCESS**

All performance elements for mating boars and females are critical and must be performed in sequence.

**BREED SWINE****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Breeding females in standing heat (estrus)
- Breeding protocol
- Semen (fresh or frozen); 3-5 billion sperm per insemination
- Handling instructions for semen
- Lubricant (nonspermicidal)
- Disposable spirette
- Paper towels
- Semen container
- Mature boar
- Pen
- Cutter for opening semen storage containers

**WORK TO BE PERFORMED**

Artificially inseminate females in estrus.

**PERFORMANCE CRITERIA**

Semen is delivered into the cervix of the estrus female via the spirette without entering the urethra, with little or no backflow.

Insemination is completed without injury.

Time required to complete the skill is 5-7 minutes.

**PERFORMANCE ELEMENTS**

*(Note: Frozen semen should be inserted into female 15 to 20 minutes after proper thawing.)*

1. Follow breeding protocol.
2. Assemble extended semen, fresh or frozen, in a container near female.
3. Assemble insemination tools near female (e.g., spirette, paper towels, cutter, lubricant, etc.).
4. Place female in pen next to a mature boar for sight, sound and smell stimulation.
5. Place steady pressure on female's back, stimulating standing behavior.
6. Wipe vulva clean with paper towel.
7. Apply a few drops of lubricant to tip of spirette.
8. Insert tip of spirette through vulva and into vagina, turning gently and slowly in a counterclockwise direction while keeping a slightly upward orientation to spirette tip.
9. Slide spirette forward while maintaining upward pressure (this avoids penetration of urethra) until resistance (the cervix), is met usually about 8-10 inches into female reproductive tract.

10. Turn spirette counterclockwise in cervix until it receives pronounced resistance due to pressure exerted by female's cervix.
11. Cut open semen container connect it to spirette and elevate it to a position above vulva for gravity flow.
12. Apply gentle or no pressure as needed to allow semen to flow into female with little or no backflow, usually 3-5 minutes.
13. Adjust spirette as necessary to allow gentle flow.
14. Remove spirette when insemination is completed by gently rotating it in a clockwise direction until pressure is greatly reduced, indicating that spirette is out of cervix. Pull spirette out of vagina and vulva.
15. Maintain back pressure throughout process and rub female's flanks and underline for a few minutes after insemination.
16. Repeat procedure as needed. Mature sows are usually inseminated at 24 and 36 hours after coming into standing heat. Gilts are usually inseminated at 12 and 24 or 24 and 36 hours after onset of standing heat.

## **PERFORMANCE ASSESSMENT CRITERIA**

### **PRODUCT**

Breeding females are artificially inseminated.

### **PROCESS**

All performance elements for artificial insemination of females are critical and must be performed in sequence. Insemination schedules may vary by producer.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

- Female swine (usually 30+ days pregnant)
- Ultrasound equipment
- Oil
- Marker and/or materials to keep records
- Restraint (usually a chute)

**WORK TO BE PERFORMED**

Detect pregnancy status by use of ultrasound equipment.

**PERFORMANCE CRITERIA**

Pregnancy status is detected with 90%-95% accuracy.

Each examination will take 1-2 minutes.

**PERFORMANCE ELEMENTS**

1. Herd swine one at a time into examining chute or otherwise restrain them individually.
2. Put a few drops of oil on tip of ultrasound probe to provide good contact with swine.
3. Place probe of ultrasound equipment against lower right rear flank of swine, just outside nipple line and 2-3 fingers behind navel.
4. Adjust handler's position (usually by kneeling) until probe can be held against swine's flank at a 45° angle from floor.
5. View indicator of ultrasound machine for a positive (pregnant) or negative reading. (*Note: Improper use of ultrasound equipment may give false readings.*)
6. Record reading for each swine.
7. Mark females (if desired) for reference.



**PERFORMANCE ASSESSMENT CRITERIA**

**PRODUCT**

Pregnancy status of swine is detected.

**PROCESS**

All performance elements for detecting pregnancy status via ultrasound are critical and must be in performed in sequence.

**RECORD KEEPING****SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Recorded data  
Record keeping system  
National Pork Producers Council (NPPC) guidelines  
NPPC Directory of Computer Software and Internet Locations  
(<http://www.nppc.org/PROD/computerdir.pdf>)  
Regulatory and management record requirements (i.e., FDA Compliance Policy Guidelines [CPG 7125.37])

**WORK TO BE PERFORMED**

Update information onto appropriate forms or by using computer software and enter data into record maintenance system.

**PERFORMANCE CRITERIA**

Information is maintained according to regulatory and management record requirements and NPPC guidelines.

Time required to update records varies based on the type and quantity of records being updated.

**PERFORMANCE ELEMENTS**

1. Verify recorded data is prepared for entry.
2. Transfer recorded data from procedures (such as feed mixing, weighing, vaccinating, ear notching, breeding, etc.) into record keeping system.
3. Maintain records according to policy or regulations.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

Recorded data is entered into the record keeping system.

**PROCESS**

All performance elements for maintaining records are critical and must be performed in sequence.

**SKILL STANDARD****CONDITIONS OF PERFORMANCE**

Given the following:

Updated data  
Record keeping system  
National Pork Producers Council (NPPC) Directory of Computer Software  
and Internet Locations (<http://www.nppc.org/PROD/computerdir.pdf>)  
Individual farm targets/goals  
Economic outlook  
Industry averages

**WORK TO BE PERFORMED**

Analyze swine management records.

**PERFORMANCE CRITERIA**

Swine management records are analyzed and the economic and relative performance of the operation is determined.

Time required to analyze the records varies according to the size of operation.

**PERFORMANCE ELEMENTS**

1. Determine records to be analyzed.
2. Verify data is current and updated.
3. Review production records (e.g., feed efficiency, litter size, cost per pound of pork produced, etc.).
4. Make management and business decisions based on analysis of records and economic outlook.

**PERFORMANCE ASSESSMENT CRITERIA****PRODUCT**

All records are analyzed.

**PROCESS**

All performance elements for analyzing records are critical and must be performed in sequence.

<b>Ad Libitum</b>	Free-choice access to feed.
<b>American Association of Swine Practitioners. (AASP)</b>	A non-profit educational professional society organized to increase knowledge of veterinarians in the field of swine research; elevate standard of swine practice; promote relations between swine practice, swine industry and public interest; promote interests of swine veterinarians; improve public stature of swine veterinarians; cooperate with veterinary, agricultural organizations and regulatory agencies; and promote goodwill among AASP members <a href="http://www.aasp.org/">www.aasp.org/</a>
<b>Certified Livestock Manager</b>	An individual who has passed a certification test as a livestock manager under the regulations of the State of Illinois. <a href="http://www.outreach.uiuc.edu/livestork/SOWM/regs/LMFA/manager">www.outreach.uiuc.edu/livestork/SOWM/regs/LMFA/manager</a>
<b>Food and Drug Administration (FDA)</b>	The federal regulatory agency whose mission is to promote public health by promptly and efficiently reviewing clinical research and taking appropriate action in a timely manner on the marketing of regulated products. Protects the public health by ensuring that foods are (1) safe, wholesome, sanitary and properly labeled; (2) that human and veterinary drugs are safe and effective; (3) that there is reasonable assurance of the safety and effectiveness of devices intended for human use; (4) that cosmetics are safe and properly labeled; and (5) that public health and safety are protected from electronic product radiation. The FDA participates through appropriate processes with representatives of other countries to reduce the burden of regulation, harmonize regulatory requirements and achieve appropriate reciprocal arrangements. Also works in consultation with experts in science, medicine and public health, and in cooperation with consumers, users, manufacturers, importers, packers, distributors and retailers of regulated products. <a href="http://www.fda.gov/">www.fda.gov/</a>
<b>Illinois Department of Agriculture (IDOA)</b>	The regulatory and advisory agency for agriculture in the state of Illinois. <a href="http://www.agr.state.il.us/">www.agr.state.il.us/</a>
<b>Livestock Management Facilities Act (LMFA)</b>	Contains statutes related to the management of livestock facilities and is designed to keep the Illinois livestock industry productive and environmentally responsible. <a href="http://www.agr.state.il.us/lmfa">www.agr.state.il.us/lmfa</a> and <a href="http://www.legis.state.il.us/ilcs/ch510/ch510act77/">www.legis.state.il.us/ilcs/ch510/ch510act77/</a>

<b>National Pork Producers Council (NPPC)</b>	The national association of pork producers whose purpose is to promote and enhance the quality, production, distribution and sale of pork and pork products. They publish guides, handbooks and videos for use by producers and have a variety of programs. <a href="http://www.nppc.org/">www.nppc.org/</a>
<b>National Research Council (NRC)</b>	A division of the National Academy of Sciences which publish bulletins giving nutrient requirements and allowances of various domestic animals. <a href="http://www.nas.edu/nrc/">www.nas.edu/nrc/</a>
<b>Occupational Safety and Health Administration (OSHA)</b>	The federal agency charged with establishing and enforcing protective standards and providing technical assistance and consultation programs. Their mission is to save lives, prevent injuries and protect the health of America's workers. <a href="http://www.osha.gov/">www.osha.gov/</a>
<b>Personal Protective Equipment (PPE)</b>	The equipment designed to protect handlers from injury. This equipment should be selected based on the procedures to be accomplished, referring to manuals or supervisors if in doubt of its appropriateness. PPE commonly includes (1) hearing protectors, safety glasses or goggles; (2) gloves [rubber or latex to protect from caustic or toxic substances, leather or canvas to protect from abrasion, disposable plastic to maintain bio-security]; (3) boots [heavy leather or rubber for protection and disposable plastic for bio-security]; (4) respirators, air-filter masks or air pack; and 5) safety lines.

<b>Academic Skills</b>	Skills (and related knowledge) contained in the subject areas and disciplines addressed in most national and state educational standards, including English, mathematics, science, etc.
<b>Assessment</b>	A process of measuring performance against a set of standards through examinations, practical tests, performance observations and/or the completion of work portfolios.
<b>Content Standard</b>	A specification of what someone should know or be able to do to successfully perform a work activity or demonstrate a skill.
<b>Critical Work Functions</b>	<p>Distinct and economically meaningful sets of work activities critical to a work process or business unit which are performed to achieve a given work objective with work outputs that have definable performance criteria. A critical work function has three major components:</p> <ul style="list-style-type: none"> <li>• <b>Conditions of Performance:</b> The information, tools, equipment and other resources provided to a person for a work performance.</li> <li>• <b>Work to Be Performed:</b> A description of the work to be performed.</li> <li>• <b>Performance Criteria:</b> The criteria used to determine the required level of performance. These criteria could include product characteristics (e.g., accuracy levels, appearance, etc.), process or procedure requirements (e.g., safety, standard professional procedures, etc.) and time and resource requirements. The IOSSCC requires that these performance criteria be further specified by more detailed individual performance elements and assessment criteria.</li> </ul>
<b>Credentialing</b>	The provision of a certificate or award to an individual indicating the attainment of a designated set of knowledge and skills and/or the demonstration of a set of critical work functions for an industry/occupational area.
<b>Illinois Occupational Skill Standards and Credentialing Council (IOSSCC)</b>	Legislated body representing business and industry which establishes skill standards criteria, endorses final products approved by the industry subcouncil and standards development committee and assists in marketing and dissemination of occupational skill standards.
<b>Industry</b>	Type of economic activity, or product or service produced or provided in a physical location (employer establishment). They are usually defined in terms of the Standard Industrial Classification (SIC) system.

<b>Industry Subcouncil</b>	Representatives from business/industry and education responsible for identifying and prioritizing occupations for which occupational performance skill standards are adapted, adopted or developed. They establish standards development committees and submit developed skill standards to the IOSSCC for endorsement. They design marketing plans and promote endorsed skill standards across the industry.
<b>Knowledge</b>	Understanding the facts, principles, processes, methods and techniques related to a particular subject area, occupation or industry.
<b>Occupation</b>	A group or cluster of jobs, sharing a common set of work functions and tasks, work products/services and/or worker characteristics. Occupations are generally defined in terms of a national classification system including the Standard Occupational Classification (SOC), Occupational Employment Statistics (OES) and the Dictionary of Occupational Titles (DOT).
<b>Occupational Cluster</b>	Grouping of occupations from one or more industries that share common skill requirements.
<b>Occupational Skill Standards</b>	Specifications of content and performance standards for critical work functions or activities and the underlying academic, workplace and occupational knowledge and skills needed for an occupation or an industry/occupational area.
<b>Occupational Skills</b>	Technical skills (and related knowledge) required to perform the work functions and activities within an occupation.
<b>Performance Standard</b>	A specification of the criteria used to judge the successful performance of a work activity or the demonstration of a skill.
<b>Product Developer</b>	Individual contracted to work with the standard development committee, state liaison, industry subcouncil and IOSSCC for the adaptation, adoption or development of skill standards content.
<b>Reliability</b>	The degree of precision or error in an assessment system so repeated measurements yield consistent results.

<b>Skill</b>	A combination of perceptual, motor, manual, intellectual and social abilities used to perform a work activity.
<b>Skill Standard</b>	Statement that specifies the knowledge and competencies required to perform successfully in the workplace.
<b>Standards Development Committee</b>	Incumbent workers, supervisors and human resource persons within the industry who perform the skills for which standards are being developed. Secondary and postsecondary educators are also represented on the committee. They identify and verify occupational skill standards and assessment mechanisms and recommend products to the industry subcouncil for approval.
<b>State Liaison</b>	Individual responsible for communicating information among all parties (e.g., IOSSCC, subcouncil, standard development committee, product developer, project director, etc.) in skill standard development.
<b>Third-Party Assessment</b>	An assessment system in which an industry-designated organization (other than the training provider) administers and controls the assessment process to ensure objectivity and consistency. The training provider could be directly involved in the assessment process under the direction and control of a third-party organization.
<b>Validity</b>	The degree of correspondence between performance in the assessment system and job performance.
<b>Workplace Skills</b>	The generic skills essential to seeking, obtaining, keeping and advancing in any job. These skills are related to the performance of critical work functions across a wide variety of industries and occupations including problem solving, leadership, teamwork, etc.



## APPENDIX C

## ILLINOIS OCCUPATIONAL SKILL STANDARDS AND CREDENTIALING COUNCIL

<b>Margaret Blackshere</b>	AFL-CIO
<b>Judith Hale</b>	Hale Associates
<b>Michael O'Neill</b>	Chicago Building Trades Council
<b>Janet Payne</b>	United Samaritans Medical Center
<b>Gene Rupnik</b>	Hospitality Industry
<b>Jim Schultz</b>	Illinois Retail Merchants Association Walgreen Company
<b>Larry Vaughn</b>	Illinois Chamber of Commerce

**APPENDIX D****AGRICULTURE AND NATURAL RESOURCES SUBCOUNCIL**

<b>Lanny Anderson</b>	Black Hawk College, East Campus
<b>Steve Bailey</b>	Family Tree & Garden Center
<b>Rick Butler</b>	Pekin Hardwood Lumber Co., Inc.
<b>Thomas Guth</b>	Lexington High School
<b>Harold Hawkinson</b>	Farm Owner/Operator
<b>Paul Julius</b>	Executive Director Midwest Food Processors Association
<b>John Kraft</b>	Owner - Kraft Fertilizer, Inc.
<b>Glen Nichols</b>	President Precision Scales
<b>Richard W. Nichols</b>	Bureau of Land & Water Conservation
<b>Tony Romolo</b>	Illinois Laborers and Contractors Construction Apprenticeship and Training Program
<b>Hugh David Scates</b>	Pat Scates and Sons
<b>Sharon Schwarz</b>	Subcouncil Chair Schwarz Nursery
<b>Lue Walters</b>	Assistant State Conservationist for Community Assistance
<b>Tom Wiles</b>	State Liaison Illinois State Board of Education
<b>William Schreck</b>	State Liaison Illinois State Board of Education

**APPENDIX E****SWINE PRODUCTION CLUSTER STANDARDS  
DEVELOPMENT COMMITTEE**

<b>Dan Carlisle</b>	Carthage, IL
<b>Rick Dean</b>	LeRoy, IL
<b>Tom Deters</b>	Livestock Services Marketing Manager FS
<b>Jeff Galle</b>	John Wood Community College Agriculture Department
<b>Gilbert Hollis</b>	University of Illinois Agriculture Department
<b>Dan Jennings</b>	UI Extension Service
<b>Bill Johnson</b>	Joliet Junior College Agriculture Department
<b>Alan Koch</b>	Mt. Sterling, IL
<b>Tim Malers</b>	Illinois Pork Producers
<b>Gary Martin</b>	Alexander, IL
<b>Martin Niesler</b>	El Paso, IL
<b>Kent Paulus</b>	Lincoln, IL
<b>Stan Toepler</b>	Eastland High School
<b>Allen Weitekamp</b>	Weitekamp Farms Farmersville, IL
<b>Mark Wilson</b>	Toulon, IL
<b>Gayla Sargent</b>	Product Developer Parkland Community College
<b>Tom Wiles</b>	State Liaison Illinois State Board of Education
<b>William Schreck</b>	State Liaison Illinois State Board of Education

<b>A. Developing an Employment Plan</b>	<ol style="list-style-type: none"> <li>1. Match interests to employment area.</li> <li>2. Match aptitudes to employment area.</li> <li>3. Identify short-term work goals.</li> <li>4. Match attitudes to job area.</li> <li>5. Match personality type to job area.</li> <li>6. Match physical capabilities to job area.</li> <li>7. Identify career information from counseling sources.</li> <li>8. Demonstrate a drug-free status.</li> </ol>
<b>B. Seeking and Applying for Employment Opportunities</b>	<ol style="list-style-type: none"> <li>1. Locate employment opportunities.</li> <li>2. Identify job requirements.</li> <li>3. Locate resources for finding employment.</li> <li>4. Prepare a resume.</li> <li>5. Prepare for job interview.</li> <li>6. Identify conditions for employment.</li> <li>7. Evaluate job opportunities.</li> <li>8. Identify steps in applying for a job.</li> <li>9. Write job application letter.</li> <li>10. Write interview follow-up letter.</li> <li>11. Complete job application form.</li> <li>12. Identify attire for job interview.</li> </ol>
<b>C. Accepting Employment</b>	<ol style="list-style-type: none"> <li>1. Apply for social security number.</li> <li>2. Complete state and federal tax forms.</li> <li>3. Accept or reject employment offer.</li> <li>4. Complete employee's Withholding Allowance Certificate Form W-4.</li> </ol>
<b>D. Communicating on the Job</b>	<ol style="list-style-type: none"> <li>1. Communicate orally with others.</li> <li>2. Use telephone etiquette.</li> <li>3. Interpret the use of body language.</li> <li>4. Prepare written communication.</li> <li>5. Follow written directions.</li> <li>6. Ask questions about tasks.</li> </ol>
<b>E. Interpreting the Economics of Work</b>	<ol style="list-style-type: none"> <li>1. Identify the role of business in the economic system.</li> <li>2. Describe responsibilities of employee.</li> <li>3. Describe responsibilities of employer or management.</li> <li>4. Investigate opportunities and options for business ownership.</li> <li>5. Assess entrepreneurship skills.</li> </ol>
<b>F. Maintaining Professionalism</b>	<ol style="list-style-type: none"> <li>1. Participate in employment orientation.</li> <li>2. Assess business image, products and/or services.</li> <li>3. Identify positive behavior.</li> <li>4. Identify company dress and appearance standards.</li> <li>5. Participate in meetings in a positive and constructive manner.</li> <li>6. Identify work-related terminology.</li> <li>7. Identify how to treat people with respect.</li> </ol>

<b>G. Adapting to and Coping with Change</b>	<ol style="list-style-type: none"> <li>1. Identify elements of job transition.</li> <li>2. Formulate a transition plan.</li> <li>3. Identify implementation procedures for a transition plan.</li> <li>4. Evaluate the transition plan.</li> <li>5. Exhibit ability to handle stress.</li> <li>6. Recognize need to change or quit a job.</li> <li>7. Write a letter of resignation.</li> </ol>
<b>H. Solving Problems and Critical Thinking</b>	<ol style="list-style-type: none"> <li>1. Identify the problem.</li> <li>2. Clarify purposes and goals.</li> <li>3. Identify solutions to a problem and their impact.</li> <li>4. Employ reasoning skills.</li> <li>5. Evaluate options.</li> <li>6. Set priorities.</li> <li>7. Select and implement a solution to a problem.</li> <li>8. Evaluate results of implemented option.</li> <li>9. Organize workloads.</li> <li>10. Assess employer and employee responsibility in solving a problem.</li> </ol>
<b>I. Maintaining a Safe and Healthy Work Environment</b>	<ol style="list-style-type: none"> <li>1. Identify safety and health rules/procedures.</li> <li>2. Demonstrate the knowledge of equipment in the workplace.</li> <li>3. Identify conservation and environmental practices and policies.</li> <li>4. Act during emergencies.</li> <li>5. Maintain work area.</li> <li>6. Identify hazardous substances in the workplace.</li> </ol>
<b>J. Demonstrating Work Ethics and Behavior</b>	<ol style="list-style-type: none"> <li>1. Identify established rules, regulations and policies.</li> <li>2. Practice cost effectiveness.</li> <li>3. Practice time management.</li> <li>4. Assume responsibility for decisions and actions.</li> <li>5. Exhibit pride.</li> <li>6. Display initiative.</li> <li>7. Display assertiveness.</li> <li>8. Demonstrate a willingness to learn.</li> <li>9. Identify the value of maintaining regular attendance.</li> <li>10. Apply ethical reasoning.</li> </ol>
<b>K. Demonstrating Technological Literacy</b>	<ol style="list-style-type: none"> <li>1. Demonstrate basic keyboarding skills.</li> <li>2. Demonstrate basic knowledge of computing.</li> <li>3. Recognize impact of technological changes on tasks and people.</li> </ol>
<b>L. Maintaining Interpersonal Relationships</b>	<ol style="list-style-type: none"> <li>1. Value individual diversity.</li> <li>2. Respond to praise or criticism.</li> <li>3. Provide constructive praise or criticism.</li> <li>4. Channel and control emotional reactions.</li> <li>5. Resolve conflicts.</li> <li>6. Display a positive attitude.</li> <li>7. Identify and react to sexual intimidation/harassment.</li> </ol>
<b>M. Demonstrating Teamwork</b>	<ol style="list-style-type: none"> <li>1. Identify style of leadership used in teamwork.</li> <li>2. Match team member skills and group activity.</li> <li>3. Work with team members.</li> <li>4. Complete a team task.</li> <li>5. Evaluate outcomes.</li> </ol>

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EFF-089 (3/2000)